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Matemáticas
Grado 5°

MINEDUCACIÓN
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TODOS POR UN NUEVO PAÍS
PAZ EQUIDAD EDUCACIÓN

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GRADO 5°

GRADO 5° - PRUEBA DE MATEMÁTICAS

- **Pregunta 1.**

En la evaluación que hizo la profesora Constanza, Ernesto obtuvo 3 puntos, Sebastián 2 y Miguel 5.

¿Cuál es el orden de los estudiantes cuando se organizan, según su puntaje, del menor al mayor?

A. Ernesto – Sebastián- Miguel.
B. Miguel – Sebastián - Ernesto.
C. Sebastián- Ernesto - Miguel.
D. Ernesto- Miguel- Sebastián.

- **Estructura**

Competencia	Comunicación, representación y modelación
Componente	Numérico - variacional
Afirmación	Describir e interpretar propiedades y relaciones de los números y sus operaciones.
Nivel de desempeño	Mínimo
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	21.8%	13.2%	56.4%	5.2%	3.3%	785
Antioquia	18.4%	9.0%	67.4%	3.9%	1.3%	21528
Apartadó	20.4%	8.7%	65.2%	4.2%	1.5%	1235
Arauca	17.3%	6.9%	70.9%	3.5%	1.3%	2030
Armenia	15.0%	7.4%	74.8%	2.6%	0.2%	2026
Atlántico	21.4%	10.8%	58.7%	5.9%	3.3%	4445
Barrancabermeja	18.2%	7.8%	69.7%	3.3%	1.0%	1778
Barranquilla	16.8%	7.3%	71.5%	3.2%	1.2%	7999
Bello	14.2%	7.0%	75.5%	2.7%	0.5%	3080
Bogotá, D.C.	10.3%	5.3%	80.5%	1.8%	2.1%	52992
Bolívar	26.2%	13.9%	50.7%	6.5%	2.6%	7953
Boyacá	15.7%	8.5%	72.1%	3.0%	0.8%	7149
Bucaramanga	10.2%	6.0%	81.6%	1.8%	0.3%	3981
Buenaventura	20.7%	10.1%	62.2%	5.2%	1.8%	2559
Buga	14.7%	5.4%	72.9%	2.9%	4.1%	864
Caldas	15.7%	7.6%	72.4%	3.5%	0.9%	4335
Cali	14.5%	6.5%	74.3%	2.8%	1.8%	14284
Caquetá	21.2%	11.8%	61.1%	4.6%	1.3%	2306
Cartagena	19.9%	9.2%	64.7%	4.3%	1.9%	8176
Cartago	17.0%	5.0%	75.1%	2.0%	0.9%	798
Casanare	15.3%	8.8%	71.9%	3.1%	0.9%	2146
Cauca	18.1%	10.4%	64.3%	5.1%	2.2%	8893
Cesar	19.4%	10.1%	64.1%	4.8%	1.6%	6129
Chocó	26.6%	13.0%	48.8%	7.7%	3.8%	2815
Chía	10.2%	3.8%	84.9%	0.9%	0.2%	959
Ciénaga	20.7%	11.8%	59.6%	4.2%	3.6%	1135
Cundinamarca	11.4%	6.2%	78.9%	2.6%	0.9%	11860
Córdoba	23.1%	11.9%	57.0%	6.1%	1.8%	9412
Cúcuta	13.9%	6.4%	76.5%	2.5%	0.6%	5518
Dosquebradas	11.5%	5.4%	79.6%	3.0%	0.5%	1248
Duitama	7.6%	4.4%	86.0%	1.4%	0.5%	1037
Envigado	9.0%	4.0%	85.0%	1.6%	0.3%	1216
Facatativá	8.4%	5.9%	83.9%	1.7%	0.1%	1062
Florencia	15.6%	8.8%	70.5%	3.7%	1.4%	1475
Floridablanca	9.8%	5.2%	82.6%	1.7%	0.7%	1852
Fusagasugá	11.8%	5.7%	79.4%	2.8%	0.3%	1058
Girardot	17.0%	9.9%	68.6%	2.8%	1.7%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	13.3%	5.6%	78.3%	2.4%	0.4%	1011
Guainía	50.0%	0.0%	50.0%	0.0%	0.0%	2
Guaviare	20.0%	11.7%	62.8%	3.4%	2.1%	710
Huila	16.1%	8.8%	71.0%	3.4%	0.7%	6415
Ibagué	12.4%	6.3%	78.0%	2.6%	0.8%	3972
Ipiales	12.8%	7.0%	76.4%	3.4%	0.4%	1014
Itagüí	18.2%	6.9%	70.9%	2.7%	1.2%	1365
Jamundí	18.7%	8.4%	68.5%	3.0%	1.4%	871
La Guajira	22.8%	12.2%	56.1%	6.5%	2.3%	2481
Lorica	23.4%	13.1%	52.8%	8.4%	2.3%	1141
Magangué	23.8%	10.8%	58.3%	4.6%	2.5%	1220
Magdalena	25.6%	13.4%	50.3%	7.1%	3.6%	6289
Maicao	21.6%	12.4%	56.8%	5.5%	3.8%	1425
Malambo	17.7%	10.1%	64.3%	5.5%	2.4%	953
Manizales	11.6%	5.0%	80.8%	2.2%	0.3%	2324
Medellín	17.1%	8.3%	70.2%	3.5%	0.9%	16107
Meta	17.7%	8.9%	67.7%	3.8%	1.9%	3976
Montería	19.3%	9.9%	65.1%	4.5%	1.1%	3793
Mosquera	11.1%	4.3%	82.3%	1.8%	0.5%	880
Nariño	15.7%	8.5%	69.5%	4.1%	2.3%	7283
Neiva	15.6%	6.7%	73.9%	3.0%	0.8%	3000
Norte de Santander	16.3%	7.6%	72.0%	3.4%	0.6%	5754
Palmira	12.9%	6.2%	77.5%	2.4%	1.2%	2080
Pasto	10.4%	5.6%	81.1%	2.6%	0.3%	3134
Pereira	12.0%	6.6%	77.7%	2.6%	1.0%	3510
Piedecuesta	12.2%	6.3%	78.4%	2.3%	0.7%	1103
Pitalito	16.1%	8.9%	70.8%	3.2%	1.0%	1277
Popayán	10.4%	4.9%	81.5%	2.0%	1.1%	2100
Putumayo	17.3%	9.6%	68.1%	3.8%	1.3%	3241
Quibdó	22.3%	12.5%	55.2%	7.4%	2.5%	1068
Quindío	16.7%	8.8%	70.3%	3.4%	0.7%	2171
Riohacha	21.4%	13.3%	58.1%	5.4%	1.8%	1686
Rionegro	9.9%	6.0%	82.6%	1.4%	0.1%	838
Risaralda	18.3%	7.8%	69.3%	3.3%	1.3%	2244
Sabaneta	12.9%	5.4%	79.6%	2.1%	0.0%	373
Sahagún	22.2%	10.7%	61.2%	4.9%	1.0%	956
San Andrés	25.3%	11.0%	56.6%	5.7%	1.3%	454
Santa Marta	20.0%	9.2%	64.7%	4.2%	1.8%	4142
Santander	13.6%	7.1%	75.5%	3.2%	0.7%	6474

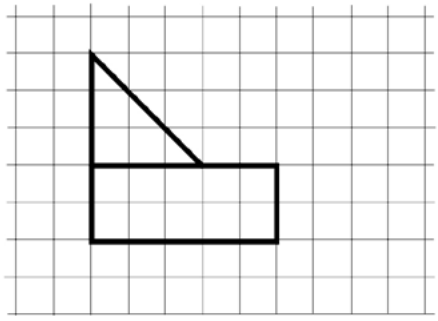
Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	18.1%	8.6%	68.5%	3.9%	0.9%	2541
Soacha	11.3%	5.6%	80.4%	2.3%	0.5%	4162
Sogamoso	7.3%	4.7%	85.8%	1.9%	0.3%	1088
Soledad	17.0%	8.4%	70.0%	3.9%	0.7%	3910
Sucre	23.1%	12.2%	57.2%	5.8%	1.6%	5581
Tolima	17.8%	9.0%	67.8%	4.1%	1.3%	7481
Tuluá	13.1%	7.4%	75.9%	2.7%	1.0%	1601
Tumaco	25.3%	14.4%	48.4%	7.4%	4.5%	1891
Tunja	10.7%	4.6%	82.0%	2.3%	0.4%	1342
Turbo	25.3%	12.1%	50.4%	8.3%	3.9%	1486
Uribia	27.0%	20.8%	38.2%	9.7%	4.2%	403
Valle del Cauca	17.6%	9.1%	68.9%	3.3%	1.1%	6241
Valledupar	19.3%	8.5%	66.5%	3.6%	2.1%	3540
Vaupés	40.0%	0.0%	40.0%	0.0%	20.0%	5
Vichada	17.4%	9.3%	66.7%	4.6%	2.0%	460
Villavicencio	12.5%	7.0%	77.1%	2.7%	0.6%	4039
Yopal	12.9%	6.6%	77.8%	1.9%	0.8%	1312
Yumbo	18.0%	9.0%	69.2%	3.4%	0.4%	941
Zipaquirá	8.3%	5.7%	83.5%	1.7%	0.9%	1026
Colombia	16.1%	8.2%	70.7%	3.6%	1.5%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

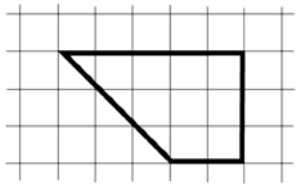
- **Pregunta 2.**

Daniela quiere armar un cuadrado con algunas piezas. Hasta ahora, ha armado la siguiente figura:

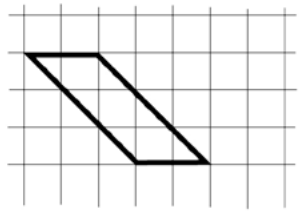


¿Cuál de las siguientes piezas debe utilizar Daniela para terminar de armar el cuadrado?

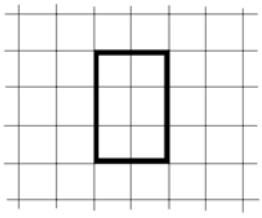
A.



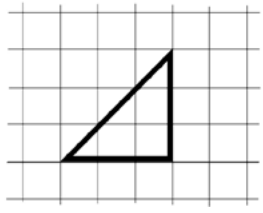
B.



C.



D.



• Estructura

Competencia	Razonamiento y argumentación
Componente	Geométrico - métrico
Afirmación	Construir y descomponer figuras planas y sólidos a partir de condiciones dadas.
Nivel de desempeño	Mínimo
Respuesta Correcta	A

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	62.9%	8.5%	10.2%	14.5%	3.8%	785
Antioquia	70.0%	8.4%	7.0%	13.0%	1.6%	21528
Apartadó	65.1%	9.8%	8.5%	14.7%	1.9%	1235
Arauca	74.2%	7.2%	5.4%	11.7%	1.4%	2030
Armenia	72.2%	10.7%	5.8%	11.0%	0.4%	2026
Atlántico	58.2%	10.4%	9.5%	18.3%	3.5%	4445
Barrancabermeja	68.0%	9.0%	5.9%	15.7%	1.4%	1778
Barranquilla	69.5%	8.6%	5.6%	15.1%	1.2%	7999
Bello	74.6%	8.0%	4.5%	12.2%	0.7%	3080
Bogotá, D.C.	80.1%	6.1%	2.9%	8.8%	2.2%	52992
Bolívar	52.2%	11.5%	12.4%	20.7%	3.2%	7953
Boyacá	74.3%	7.2%	5.0%	12.8%	0.9%	7149
Bucaramanga	79.9%	6.1%	3.0%	10.6%	0.4%	3981
Buenaventura	62.0%	8.5%	9.1%	18.1%	2.2%	2559
Buga	70.6%	8.7%	5.3%	11.2%	4.2%	864
Caldas	73.7%	7.9%	5.1%	12.4%	1.0%	4335
Cali	74.3%	7.9%	4.5%	11.4%	2.0%	14284
Caquetá	68.5%	8.9%	9.6%	11.0%	2.1%	2306
Cartagena	62.8%	9.4%	7.8%	17.8%	2.2%	8176
Cartago	72.6%	8.8%	5.4%	12.2%	1.1%	798
Casanare	76.7%	6.7%	5.5%	10.1%	1.1%	2146
Cauca	68.6%	7.5%	8.1%	13.3%	2.6%	8893
Cesar	65.4%	7.8%	7.5%	17.7%	1.7%	6129
Chocó	47.8%	12.0%	14.2%	21.3%	4.7%	2815
Chía	80.9%	7.1%	3.3%	8.1%	0.5%	959

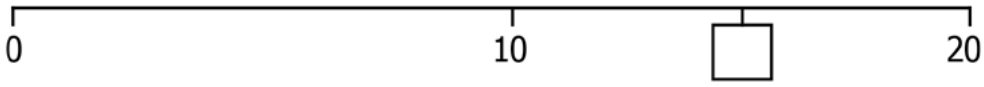
ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	63.7%	7.8%	7.2%	17.8%	3.5%	1135
Cundinamarca	78.4%	6.2%	3.9%	10.5%	1.0%	11860
Córdoba	60.1%	9.1%	9.9%	18.8%	2.1%	9412
Cúcuta	75.4%	7.1%	4.2%	12.6%	0.7%	5518
Dosquebradas	72.8%	8.3%	4.7%	13.2%	1.0%	1248
Duitama	82.3%	5.0%	3.0%	9.4%	0.4%	1037
Envigado	80.7%	7.2%	2.6%	9.2%	0.3%	1216
Facatativá	82.8%	4.8%	2.9%	9.3%	0.2%	1062
Florencia	69.5%	8.3%	6.6%	14.2%	1.4%	1475
Floridablanca	80.1%	6.4%	3.0%	9.8%	0.8%	1852
Fusagasugá	78.0%	7.8%	3.3%	10.6%	0.3%	1058
Girardot	67.4%	8.2%	7.1%	15.7%	1.5%	777
Girón	75.9%	7.8%	4.3%	11.8%	0.3%	1011
Guainía	50.0%	0.0%	50.0%	0.0%	0.0%	2
Guaviare	68.2%	9.4%	7.5%	11.7%	3.2%	710
Huila	74.6%	6.6%	5.1%	12.8%	0.8%	6415
Ibagué	75.7%	7.7%	4.5%	11.3%	0.8%	3972
Ipiales	84.3%	4.1%	4.1%	7.0%	0.4%	1014
Itagüí	69.9%	10.0%	6.4%	12.3%	1.4%	1365
Jamundí	69.0%	8.7%	4.7%	16.0%	1.6%	871
La Guajira	60.6%	9.1%	9.7%	17.5%	3.1%	2481
Lorica	54.3%	12.1%	11.2%	20.7%	1.8%	1141
Magangué	57.5%	9.8%	9.9%	19.9%	2.9%	1220
Magdalena	53.1%	10.6%	11.9%	20.1%	4.4%	6289
Maicao	53.6%	12.3%	11.9%	18.1%	4.1%	1425
Malambo	63.3%	7.8%	6.7%	19.4%	2.8%	953
Manizales	75.9%	8.4%	2.7%	12.4%	0.6%	2324
Medellín	70.2%	9.5%	6.2%	13.0%	1.0%	16107
Meta	72.2%	8.1%	6.3%	11.5%	1.9%	3976
Montería	66.3%	8.3%	7.6%	16.6%	1.3%	3793
Mosquera	81.5%	6.1%	2.7%	9.1%	0.6%	880
Nariño	74.6%	5.9%	6.2%	10.7%	2.6%	7283
Neiva	73.0%	7.5%	4.8%	14.0%	0.8%	3000
Norte de Santander	73.2%	7.4%	6.0%	12.8%	0.7%	5754
Palmira	76.3%	5.9%	4.5%	11.9%	1.4%	2080
Pasto	82.0%	5.7%	3.1%	8.9%	0.4%	3134
Pereira	74.8%	7.5%	3.9%	12.4%	1.3%	3510
Piedecuesta	75.8%	6.3%	4.3%	12.6%	1.1%	1103

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Pitalito	74.9%	7.2%	5.5%	11.5%	0.9%	1277
Popayán	81.0%	5.4%	3.3%	8.9%	1.4%	2100
Putumayo	75.5%	7.1%	6.6%	9.8%	1.1%	3241
Quibdó	48.3%	10.1%	14.6%	23.8%	3.2%	1068
Quindío	72.3%	9.3%	5.6%	12.2%	0.6%	2171
Riohacha	58.3%	9.8%	11.2%	17.9%	2.8%	1686
Rionegro	77.1%	7.6%	2.9%	12.2%	0.2%	838
Risaralda	71.2%	7.7%	5.7%	13.9%	1.5%	2244
Sabaneta	80.7%	7.2%	3.5%	8.0%	0.5%	373
Sahagún	60.4%	12.1%	7.7%	18.4%	1.4%	956
San Andrés	53.7%	15.0%	9.5%	19.6%	2.2%	454
Santa Marta	64.7%	9.5%	6.7%	16.9%	2.1%	4142
Santander	75.4%	6.7%	4.4%	12.7%	0.8%	6474
Sincelejo	63.5%	9.6%	6.8%	18.5%	1.5%	2541
Soacha	78.5%	6.2%	3.8%	10.9%	0.6%	4162
Sogamoso	82.9%	4.4%	2.5%	9.7%	0.5%	1088
Soledad	68.6%	8.0%	6.5%	15.9%	1.1%	3910
Sucre	56.5%	11.7%	10.0%	19.8%	2.0%	5581
Tolima	68.9%	8.3%	7.0%	14.5%	1.3%	7481
Tuluá	74.3%	7.6%	5.1%	11.7%	1.2%	1601
Tumaco	55.1%	10.6%	11.6%	17.5%	5.2%	1891
Tunja	81.8%	5.2%	2.8%	9.7%	0.4%	1342
Turbo	54.6%	10.4%	12.3%	18.4%	4.3%	1486
Uribia	51.6%	14.6%	13.6%	17.4%	2.7%	403
Valle del Cauca	71.7%	7.6%	6.3%	13.2%	1.2%	6241
Valledupar	65.2%	8.0%	7.2%	17.3%	2.2%	3540
Vaupés	60.0%	20.0%	0.0%	0.0%	20.0%	5
Vichada	64.1%	9.8%	10.7%	12.6%	2.8%	460
Villavicencio	76.1%	7.7%	3.8%	11.6%	0.8%	4039
Yopal	81.7%	5.5%	4.0%	7.9%	0.8%	1312
Yumbo	71.4%	7.8%	6.6%	13.6%	0.6%	941
Zipaquirá	82.0%	5.3%	3.0%	8.8%	1.0%	1026
Colombia	71.2%	7.9%	6.0%	13.2%	1.7%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 3.**

Observa la recta numérica.



¿Qué número se debe escribir en ☐ ?

A. 5
B. 10
C. 15
D. 25

- **Estructura**

Competencia	Comunicación, representación y modelación
Componente	Numérico - variacional
Afirmación	Reconocer e interpretar números naturales y fracciones en diferentes contextos
Nivel de desempeño	Mínimo
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	8.7%	11.3%	67.1%	9.9%	2.9%	785
Antioquia	8.6%	8.3%	74.0%	7.4%	1.8%	21528
Apartadó	8.5%	12.6%	68.7%	8.3%	1.9%	1235
Arauca	7.4%	6.9%	78.7%	5.2%	1.7%	2030
Armenia	7.7%	6.2%	79.3%	6.1%	0.6%	2026
Atlántico	9.8%	11.8%	65.1%	9.4%	3.9%	4445
Barrancabermeja	8.6%	6.2%	78.1%	5.3%	1.7%	1778
Barranquilla	7.5%	8.2%	76.7%	6.1%	1.6%	7999
Bello	7.4%	5.8%	81.5%	4.5%	0.8%	3080
Bogotá, D.C.	5.1%	3.5%	86.1%	3.2%	2.2%	52992
Bolívar	10.6%	14.7%	59.0%	11.9%	3.8%	7953
Boyacá	6.4%	6.0%	81.7%	4.9%	1.0%	7149
Bucaramanga	5.3%	3.3%	87.7%	3.2%	0.5%	3981
Buenaventura	10.7%	10.8%	66.7%	8.7%	3.1%	2559
Buga	7.4%	5.4%	78.1%	4.3%	4.7%	864
Caldas	7.1%	6.3%	79.2%	6.3%	1.1%	4335
Cali	6.9%	5.4%	80.7%	4.8%	2.2%	14284
Caquetá	9.1%	10.0%	71.9%	7.2%	1.9%	2306
Cartagena	8.9%	9.8%	71.6%	7.3%	2.4%	8176
Cartago	6.5%	5.5%	81.8%	5.1%	1.0%	798
Casanare	8.2%	7.0%	79.0%	4.6%	1.2%	2146
Cauca	8.4%	10.3%	70.5%	7.9%	2.9%	8893
Cesar	9.6%	10.0%	70.0%	8.4%	2.0%	6129
Chocó	11.0%	19.2%	52.1%	11.9%	5.8%	2815
Chía	4.3%	2.9%	88.9%	3.3%	0.5%	959
Ciénaga	6.0%	11.8%	67.6%	10.7%	4.0%	1135
Cundinamarca	5.2%	4.9%	84.6%	4.1%	1.1%	11860
Córdoba	10.1%	12.1%	65.5%	9.9%	2.4%	9412
Cúcuta	7.2%	5.6%	82.5%	3.9%	0.9%	5518
Dosquebradas	6.4%	4.9%	82.9%	4.3%	1.5%	1248
Duitama	3.9%	3.3%	90.5%	2.0%	0.4%	1037
Envigado	4.9%	3.2%	88.7%	2.5%	0.7%	1216
Facatativá	5.0%	3.5%	88.1%	3.1%	0.3%	1062
Florencia	8.5%	8.7%	73.4%	7.1%	2.2%	1475
Floridablanca	4.2%	3.6%	88.4%	2.8%	1.0%	1852
Fusagasugá	6.3%	3.5%	85.6%	4.1%	0.5%	1058
Girardot	7.5%	7.1%	77.7%	6.2%	1.5%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	7.1%	4.0%	82.9%	5.4%	0.6%	1011
Guainía	50.0%	0.0%	50.0%	0.0%	0.0%	2
Guaviare	6.9%	7.7%	75.2%	6.6%	3.5%	710
Huila	7.9%	7.0%	77.9%	6.1%	1.1%	6415
Ibagué	6.5%	4.7%	83.7%	4.2%	0.9%	3972
Ipiales	5.4%	4.9%	83.7%	5.2%	0.7%	1014
Itagüí	8.1%	7.6%	76.8%	5.7%	1.7%	1365
Jamundí	9.2%	8.0%	74.1%	6.5%	2.2%	871
La Guajira	8.7%	11.5%	65.5%	10.9%	3.4%	2481
Lorica	10.6%	14.2%	61.3%	11.0%	2.8%	1141
Magangué	9.5%	11.1%	68.0%	8.8%	2.6%	1220
Magdalena	10.9%	15.0%	58.2%	11.5%	4.4%	6289
Maicao	8.9%	13.5%	61.5%	11.4%	4.6%	1425
Malambo	8.4%	8.7%	72.1%	8.0%	2.8%	953
Manizales	6.0%	4.5%	84.9%	4.0%	0.6%	2324
Medellín	8.2%	7.4%	76.6%	6.6%	1.3%	16107
Meta	7.7%	7.6%	76.0%	6.5%	2.1%	3976
Montería	8.7%	8.8%	73.3%	7.4%	1.7%	3793
Mosquera	3.6%	3.5%	89.7%	2.5%	0.7%	880
Nariño	8.0%	7.7%	74.5%	6.8%	3.0%	7283
Neiva	7.7%	5.6%	80.7%	5.1%	0.9%	3000
Norte de Santander	7.4%	6.3%	80.4%	5.1%	0.8%	5754
Palmira	5.5%	4.6%	83.8%	4.6%	1.5%	2080
Pasto	6.1%	4.7%	84.8%	4.0%	0.5%	3134
Pereira	6.2%	4.8%	82.8%	4.9%	1.3%	3510
Piedecuesta	6.1%	5.1%	83.7%	3.9%	1.3%	1103
Pitalito	8.1%	6.9%	78.8%	5.2%	0.9%	1277
Popayán	5.8%	4.7%	83.7%	4.1%	1.8%	2100
Putumayo	8.0%	7.6%	76.5%	6.0%	2.0%	3241
Quibdó	9.6%	15.0%	59.3%	11.8%	4.3%	1068
Quindío	8.6%	7.4%	75.2%	8.0%	0.9%	2171
Riohacha	8.5%	10.1%	68.2%	10.0%	3.1%	1686
Rionegro	6.2%	2.3%	87.6%	3.3%	0.6%	838
Risaralda	8.8%	7.1%	76.1%	6.6%	1.4%	2244
Sabaneta	6.4%	4.6%	83.9%	4.8%	0.3%	373
Sahagún	8.1%	10.0%	70.4%	10.6%	0.9%	956
San Andrés	9.5%	10.4%	67.6%	10.4%	2.2%	454
Santa Marta	8.6%	8.2%	73.7%	7.0%	2.5%	4142
Santander	6.5%	5.7%	82.4%	4.4%	1.1%	6474

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	8.5%	8.6%	75.0%	6.6%	1.3%	2541
Soacha	6.9%	4.4%	84.5%	3.5%	0.7%	4162
Sogamoso	5.2%	2.2%	90.3%	1.8%	0.5%	1088
Soledad	7.5%	8.1%	77.5%	5.9%	1.0%	3910
Sucre	10.7%	11.5%	65.4%	9.9%	2.5%	5581
Tolima	7.7%	8.6%	74.2%	7.8%	1.7%	7481
Tuluá	6.9%	5.1%	81.6%	5.4%	1.1%	1601
Tumaco	11.1%	14.1%	56.4%	12.2%	6.3%	1891
Tunja	3.8%	3.0%	90.5%	2.2%	0.5%	1342
Turbo	10.4%	13.6%	60.0%	11.2%	4.9%	1486
Uribia	13.2%	15.9%	52.1%	15.4%	3.5%	403
Valle del Cauca	8.7%	7.4%	76.2%	6.1%	1.6%	6241
Valledupar	8.3%	8.4%	72.9%	7.7%	2.8%	3540
Vaupés	0.0%	20.0%	60.0%	0.0%	20.0%	5
Vichada	8.7%	11.3%	70.0%	5.7%	4.3%	460
Villavicencio	5.1%	5.2%	84.8%	3.7%	1.1%	4039
Yopal	6.3%	5.0%	84.4%	3.3%	1.1%	1312
Yumbo	8.0%	6.7%	79.1%	4.8%	1.5%	941
Zipaquirá	4.3%	4.5%	87.1%	2.5%	1.6%	1026
Colombia	7.5%	7.3%	77.2%	6.1%	1.9%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

• Pregunta 4.

La siguiente tabla muestra los puntos obtenidos por 4 equipos de fútbol, en las tres fechas de un campeonato:

	Fecha 1	**Fecha 2**	**Fecha 3**
Equipo F	0	3	0
Equipo G	3	1	1
Equipo H	0	1	3
Equipo I	3	0	1

¿Cuántos puntos obtuvo el equipo I en las tres fechas del campeonato?

A. 1
B. 3
C. 4
D. 5

• Estructura

Competencia	Comunicación, representación y modelación
Componente	Aleatorio
Afirmación	Interpretar datos relativos a situaciones del entorno escolar.
Nivel de desempeño	Mínimo
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	8.2%	16.9%	56.6%	14.8%	3.6%	785
Antioquia	7.6%	11.7%	70.7%	8.3%	1.7%	21528
Apartadó	10.1%	10.2%	69.3%	8.7%	1.6%	1235
Arauca	6.8%	9.9%	75.0%	6.6%	1.7%	2030
Armenia	8.3%	9.0%	76.4%	5.4%	0.8%	2026
Atlántico	10.4%	13.7%	60.9%	10.8%	4.3%	4445
Barrancabermeja	9.9%	9.0%	72.0%	7.0%	2.1%	1778
Barranquilla	9.4%	10.2%	72.4%	6.5%	1.4%	7999
Bello	5.9%	8.4%	79.8%	5.1%	0.7%	3080
Bogotá, D.C.	5.3%	7.0%	81.8%	3.5%	2.4%	52992
Bolívar	10.5%	16.4%	54.9%	14.5%	3.6%	7953
Boyacá	7.9%	10.5%	74.8%	5.6%	1.2%	7149
Bucaramanga	6.4%	6.8%	82.9%	3.4%	0.5%	3981
Buenaventura	9.0%	12.1%	65.3%	11.1%	2.5%	2559
Buga	6.1%	10.0%	73.8%	5.9%	4.2%	864
Caldas	6.7%	10.1%	75.1%	6.7%	1.4%	4335
Cali	7.6%	8.5%	76.3%	5.4%	2.2%	14284
Caquetá	7.9%	13.1%	66.9%	10.1%	2.0%	2306
Cartagena	9.9%	11.8%	67.9%	8.0%	2.4%	8176
Cartago	7.3%	9.1%	76.9%	5.4%	1.3%	798
Casanare	7.4%	10.5%	73.6%	7.2%	1.4%	2146
Cauca	7.5%	12.5%	66.7%	10.4%	2.9%	8893
Cesar	8.2%	13.7%	67.4%	8.7%	1.9%	6129
Chocó	10.9%	16.6%	50.3%	16.9%	5.3%	2815
Chía	4.9%	3.8%	87.0%	3.9%	0.5%	959
Ciénaga	9.2%	12.9%	62.5%	12.3%	3.2%	1135
Cundinamarca	6.6%	8.9%	78.4%	5.0%	1.1%	11860
Córdoba	9.4%	15.0%	60.6%	12.5%	2.5%	9412
Cúcuta	7.6%	9.5%	76.5%	5.4%	0.9%	5518
Dosquebradas	5.8%	8.3%	80.6%	4.0%	1.3%	1248
Duitama	5.5%	5.9%	84.4%	3.5%	0.8%	1037
Envigado	5.1%	5.0%	85.9%	3.5%	0.5%	1216
Facatativá	4.9%	7.3%	83.3%	4.0%	0.5%	1062
Florencia	8.9%	12.7%	69.2%	7.1%	2.0%	1475
Floridablanca	5.5%	6.2%	83.7%	3.7%	0.9%	1852
Fusagasugá	6.0%	9.3%	78.4%	5.5%	0.8%	1058
Girardot	9.5%	13.8%	69.9%	5.9%	0.9%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	7.9%	7.9%	78.0%	5.4%	0.7%	1011
Guainía	50.0%	0.0%	0.0%	50.0%	0.0%	2
Guaviare	5.4%	10.3%	72.3%	8.6%	3.5%	710
Huila	8.2%	11.7%	72.4%	6.8%	1.0%	6415
Ibagué	7.0%	9.2%	79.0%	3.8%	1.0%	3972
Ipiales	4.5%	8.6%	81.6%	4.3%	1.0%	1014
Itagüí	6.6%	7.5%	77.7%	6.4%	1.8%	1365
Jamundí	7.9%	11.1%	71.1%	7.8%	2.1%	871
La Guajira	10.4%	15.5%	59.2%	11.2%	3.7%	2481
Lorica	11.7%	14.6%	57.0%	13.3%	3.3%	1141
Magangué	8.3%	15.7%	63.9%	8.9%	3.2%	1220
Magdalena	11.1%	16.1%	54.1%	14.0%	4.6%	6289
Maicao	10.0%	14.2%	59.0%	12.0%	4.8%	1425
Malambo	9.0%	11.0%	67.6%	10.1%	2.3%	953
Manizales	4.9%	8.6%	81.1%	4.7%	0.6%	2324
Medellín	8.0%	9.4%	74.6%	6.8%	1.3%	16107
Meta	7.6%	11.0%	72.0%	7.2%	2.2%	3976
Montería	8.7%	12.4%	68.7%	8.4%	1.7%	3793
Mosquera	7.2%	6.9%	82.3%	3.0%	0.7%	880
Nariño	6.2%	10.9%	72.0%	8.0%	3.0%	7283
Neiva	8.1%	9.9%	74.8%	6.1%	1.0%	3000
Norte de Santander	6.7%	9.8%	76.4%	6.0%	1.1%	5754
Palmira	6.8%	7.8%	80.1%	3.9%	1.4%	2080
Pasto	4.3%	7.8%	82.8%	4.5%	0.6%	3134
Pereira	6.0%	8.4%	79.8%	4.4%	1.4%	3510
Piedecuesta	6.8%	7.6%	80.0%	4.4%	1.2%	1103
Pitalito	7.4%	9.6%	73.5%	8.3%	1.3%	1277
Popayán	6.4%	7.3%	80.5%	4.0%	1.8%	2100
Putumayo	7.3%	11.0%	72.0%	7.8%	1.9%	3241
Quibdó	11.3%	14.2%	58.1%	12.3%	4.0%	1068
Quindío	7.0%	9.9%	74.4%	7.6%	1.0%	2171
Riohacha	9.9%	13.9%	63.2%	10.3%	2.7%	1686
Rionegro	5.8%	6.8%	82.2%	4.8%	0.4%	838
Risaralda	6.3%	11.7%	72.5%	7.8%	1.7%	2244
Sabaneta	5.9%	4.3%	85.0%	4.6%	0.3%	373
Sahagún	9.6%	15.0%	62.6%	11.9%	0.9%	956
San Andrés	11.9%	16.3%	61.5%	8.8%	1.5%	454
Santa Marta	9.5%	12.6%	67.9%	7.5%	2.4%	4142
Santander	6.2%	9.3%	77.8%	5.6%	1.1%	6474

Continúa en la siguiente página

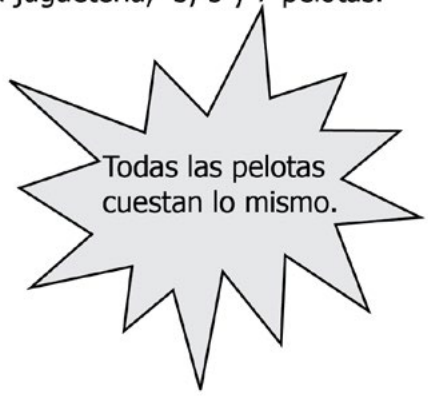
ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	8.9%	10.9%	71.2%	7.6%	1.5%	2541
Soacha	7.3%	8.0%	78.9%	4.9%	0.9%	4162
Sogamoso	4.7%	6.1%	85.6%	3.0%	0.6%	1088
Soledad	9.2%	11.0%	71.8%	6.6%	1.4%	3910
Sucre	9.9%	14.5%	59.8%	13.2%	2.6%	5581
Tolima	8.5%	12.6%	68.9%	8.4%	1.6%	7481
Tuluá	8.1%	8.1%	76.6%	5.9%	1.2%	1601
Tumaco	8.7%	16.6%	52.7%	16.0%	6.1%	1891
Tunja	5.6%	8.1%	82.2%	3.4%	0.7%	1342
Turbo	12.3%	15.3%	55.5%	12.3%	4.6%	1486
Uribia	10.4%	18.9%	48.6%	18.4%	3.7%	403
Valle del Cauca	7.2%	10.0%	73.9%	7.2%	1.8%	6241
Valledupar	7.8%	11.6%	69.5%	8.1%	3.1%	3540
Vaupés	20.0%	20.0%	20.0%	20.0%	20.0%	5
Vichada	8.3%	11.5%	62.8%	13.0%	4.3%	460
Villavicencio	7.3%	8.5%	78.3%	4.8%	1.1%	4039
Yopal	6.6%	7.0%	80.0%	5.1%	1.2%	1312
Yumbo	8.1%	9.4%	74.7%	6.7%	1.2%	941
Zipaquirá	6.2%	9.1%	79.8%	3.4%	1.5%	1026
Colombia	7.6%	10.4%	73.0%	7.1%	2.0%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 5.**

La siguiente tabla muestra cuánto cuestan, en una juguetería, 3, 5 y 7 pelotas.

Cantidad de pelotas	Costo
3	$3.600
5	$6.000
7	$8.400



¿Cuánto cuesta una pelota?

A. $1.000
B. $1.200
C. $3.600
D. $8.400

- **Estructura**

Competencia	Planteamiento y resolución de problemas
Componente	Numérico - variacional
Afirmación	Resolver y formular problemas sencillos de proporcionalidad directa e inversa
Nivel de desempeño	Mínimo
Respuesta correcta	B

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	16.9%	44.1%	18.0%	18.1%	2.9%	785
Antioquia	14.2%	63.3%	10.9%	10.0%	1.5%	21528
Apartadó	15.5%	60.3%	13.2%	9.6%	1.4%	1235
Arauca	11.9%	66.3%	10.1%	10.1%	1.6%	2030
Armenia	13.7%	69.9%	10.0%	5.9%	0.5%	2026
Atlántico	14.2%	54.4%	13.8%	13.7%	3.9%	4445
Barrancabermeja	15.4%	65.4%	11.4%	6.4%	1.5%	1778
Barranquilla	12.1%	65.2%	11.6%	9.7%	1.4%	7999
Bello	12.3%	72.0%	8.9%	5.9%	0.9%	3080
Bogotá, D.C.	10.2%	75.9%	7.2%	4.4%	2.3%	52992
Bolívar	18.6%	45.4%	15.7%	17.3%	3.1%	7953
Boyacá	11.8%	70.1%	9.8%	7.4%	0.8%	7149
Bucaramanga	10.6%	77.7%	7.3%	3.7%	0.7%	3981
Buenaventura	14.5%	55.8%	14.3%	13.0%	2.5%	2559
Buga	9.5%	70.1%	8.8%	7.6%	3.9%	864
Caldas	11.4%	68.7%	10.3%	8.7%	0.9%	4335
Cali	12.1%	70.1%	9.4%	6.3%	2.2%	14284
Caquetá	13.1%	60.4%	12.3%	12.6%	1.6%	2306
Cartagena	15.0%	58.6%	12.9%	11.1%	2.5%	8176
Cartago	12.2%	69.8%	8.3%	8.3%	1.5%	798
Casanare	13.7%	64.6%	10.8%	9.3%	1.6%	2146
Cauca	14.0%	57.7%	12.7%	13.1%	2.5%	8893
Cesar	14.9%	58.0%	12.7%	12.5%	1.9%	6129
Chocó	20.8%	39.3%	16.2%	19.1%	4.7%	2815
Chía	9.5%	78.1%	8.0%	3.9%	0.5%	959
Ciénaga	12.4%	58.1%	14.1%	11.6%	3.7%	1135
Cundinamarca	11.2%	73.2%	8.4%	6.1%	1.1%	11860
Córdoba	18.5%	50.3%	14.6%	14.7%	2.0%	9412
Cúcuta	10.8%	71.0%	10.7%	6.5%	0.9%	5518
Dosquebradas	11.1%	73.8%	9.6%	4.7%	0.8%	1248
Duitama	8.4%	82.3%	6.4%	2.5%	0.5%	1037
Envigado	9.5%	79.8%	5.6%	4.5%	0.7%	1216
Facatativá	11.3%	76.3%	7.0%	5.2%	0.3%	1062
Florencia	12.5%	64.9%	12.2%	9.4%	0.9%	1475
Floridablanca	8.8%	80.1%	6.9%	3.5%	0.7%	1852
Fusagasugá	9.8%	74.2%	9.3%	6.2%	0.5%	1058
Girardot	13.3%	65.3%	10.4%	9.3%	1.8%	777

Continúa en la siguiente página

ETC	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	10.6%	75.4%	7.4%	5.9%	0.7%	1011
Guainía	0.0%	0.0%	0.0%	100.0%	0.0%	2
Guaviare	17.0%	55.4%	12.4%	12.4%	2.8%	710
Huila	11.9%	65.0%	11.8%	10.4%	0.9%	6415
Ibagué	10.8%	73.4%	8.8%	5.9%	1.1%	3972
Ipiales	9.8%	73.9%	8.9%	6.7%	0.8%	1014
Itagüí	12.3%	69.8%	8.6%	7.7%	1.6%	1365
Jamundí	15.8%	63.3%	12.4%	6.7%	1.8%	871
La Guajira	16.4%	48.8%	15.4%	16.5%	3.0%	2481
Lorica	18.9%	47.2%	15.5%	16.4%	2.0%	1141
Magangué	18.0%	51.3%	15.0%	12.7%	3.0%	1220
Magdalena	17.3%	45.0%	15.9%	17.7%	4.2%	6289
Maicao	17.1%	47.6%	14.3%	16.6%	4.4%	1425
Malambo	14.1%	56.5%	12.8%	14.0%	2.7%	953
Manizales	10.3%	75.8%	7.7%	5.6%	0.6%	2324
Medellín	13.5%	68.3%	9.6%	7.4%	1.1%	16107
Meta	13.3%	64.7%	10.8%	9.0%	2.2%	3976
Montería	17.1%	57.2%	12.9%	11.2%	1.6%	3793
Mosquera	9.3%	76.6%	7.3%	5.9%	0.9%	880
Nariño	12.1%	63.3%	11.5%	10.2%	2.8%	7283
Neiva	12.7%	67.7%	11.0%	8.0%	0.7%	3000
Norte de Santander	11.5%	68.1%	10.3%	9.2%	0.9%	5754
Palmira	13.4%	69.6%	9.2%	6.3%	1.4%	2080
Pasto	11.1%	75.3%	8.8%	4.0%	0.8%	3134
Pereira	10.8%	73.1%	9.0%	5.9%	1.2%	3510
Piedecuesta	12.1%	72.1%	8.8%	5.9%	1.2%	1103
Pitalito	12.1%	66.5%	11.0%	9.2%	1.3%	1277
Popayán	10.5%	74.1%	8.6%	5.1%	1.7%	2100
Putumayo	14.4%	63.5%	11.3%	9.1%	1.6%	3241
Quibdó	18.5%	49.1%	14.1%	14.7%	3.6%	1068
Quindío	12.8%	67.4%	10.0%	9.0%	0.8%	2171
Riohacha	15.9%	49.6%	14.7%	17.9%	2.0%	1686
Rionegro	12.4%	76.5%	6.9%	3.7%	0.5%	838
Risaralda	14.9%	62.7%	11.2%	9.8%	1.3%	2244
Sabaneta	11.3%	77.7%	6.7%	3.5%	0.8%	373
Sahagún	19.4%	51.5%	14.3%	14.0%	0.8%	956
San Andrés	17.2%	54.6%	11.9%	14.5%	1.8%	454
Santa Marta	13.7%	60.9%	13.0%	10.4%	2.1%	4142
Santander	11.4%	72.3%	8.3%	7.1%	0.9%	6474

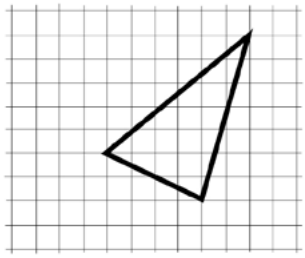
Continúa en la siguiente página

ETC	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	15.7%	60.5%	13.0%	9.2%	1.6%	2541
Soacha	12.0%	72.9%	9.2%	5.4%	0.5%	4162
Sogamoso	8.9%	81.9%	6.3%	2.6%	0.4%	1088
Soledad	13.3%	64.4%	12.3%	9.0%	1.0%	3910
Sucre	17.5%	48.5%	16.2%	15.7%	2.1%	5581
Tolima	12.5%	62.6%	12.1%	11.5%	1.3%	7481
Tuluá	12.1%	70.7%	9.4%	6.9%	0.9%	1601
Tumaco	18.2%	42.2%	15.5%	18.0%	6.0%	1891
Tunja	9.2%	80.0%	6.5%	3.7%	0.7%	1342
Turbo	22.3%	44.2%	14.0%	15.2%	4.2%	1486
Uribia	18.9%	40.2%	19.6%	19.6%	1.7%	403
Valle del Cauca	13.0%	66.1%	10.7%	8.9%	1.3%	6241
Valledupar	15.2%	58.3%	12.9%	11.0%	2.7%	3540
Vaupés	60.0%	0.0%	0.0%	20.0%	20.0%	5
Vichada	14.8%	53.5%	15.4%	12.6%	3.7%	460
Villavicencio	10.2%	72.8%	9.0%	7.0%	1.1%	4039
Yopal	9.1%	74.2%	8.4%	7.2%	1.1%	1312
Yumbo	13.1%	67.4%	10.1%	8.8%	0.6%	941
Zipaquirá	11.3%	75.9%	6.4%	5.4%	1.0%	1026
Colombia	13.0%	65.6%	10.6%	8.9%	1.8%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

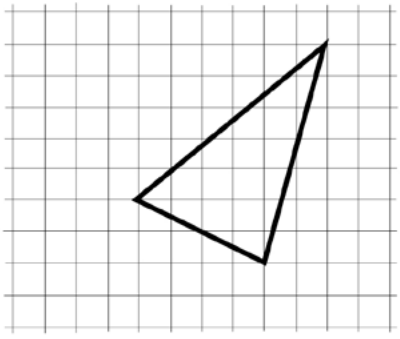
- **Pregunta 6.**

Olga dibujó un triángulo en su cuaderno, como el que se muestra a continuación.

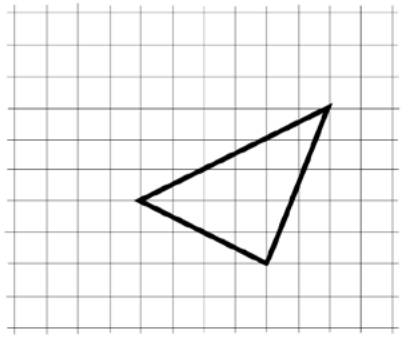


Olga sacó una fotocopia ampliada del triángulo que dibujó. ¿Cuál de las siguientes figuras corresponde a la fotocopia?

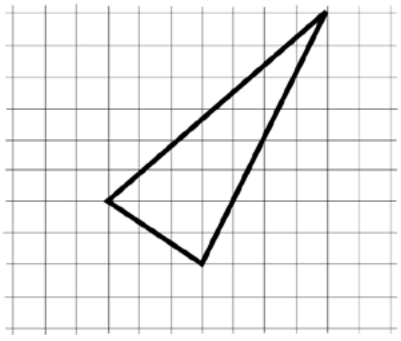
A.



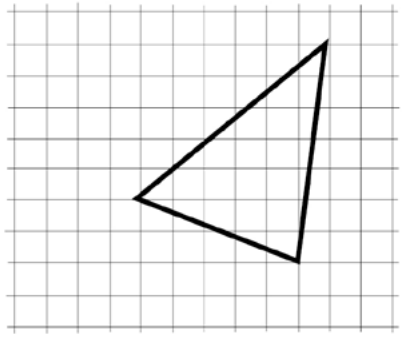
B.



C.



D.



• Estructura

Competencia	Razonamiento y argumentación
Componente	Geométrico - métrico
Afirmación	Conjeturar y verificar los resultados de aplicar transformaciones a figuras en el plano
Nivel de desempeño	Mínimo
Respuesta correcta	A

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	65.1%	13.0%	7.3%	9.9%	4.7%	785
Antioquia	72.4%	10.7%	5.9%	9.5%	1.5%	21528
Apartadó	70.0%	10.6%	6.9%	10.9%	1.7%	1235
Arauca	74.3%	9.8%	6.3%	8.0%	1.6%	2030
Armenia	76.9%	7.9%	5.7%	9.0%	0.4%	2026
Atlántico	65.6%	12.9%	7.7%	9.9%	3.9%	4445
Barrancabermeja	73.6%	10.5%	6.4%	7.9%	1.6%	1778
Barranquilla	73.1%	9.8%	5.7%	10.3%	1.2%	7999
Bello	76.9%	8.0%	4.8%	9.5%	0.8%	3080
Bogotá, D.C.	78.2%	6.9%	4.5%	8.2%	2.2%	52992
Bolívar	62.6%	15.1%	8.7%	10.1%	3.6%	7953
Boyacá	75.5%	9.7%	5.7%	8.2%	1.0%	7149
Bucaramanga	79.9%	6.5%	4.6%	8.6%	0.5%	3981
Buenaventura	66.4%	11.6%	7.3%	11.9%	2.7%	2559
Buga	76.7%	7.3%	3.6%	8.2%	4.2%	864
Caldas	75.5%	9.9%	4.5%	9.1%	0.9%	4335
Cali	76.6%	7.8%	5.2%	8.3%	2.1%	14284
Caquetá	70.1%	11.4%	7.3%	9.6%	1.6%	2306
Cartagena	69.6%	12.1%	6.9%	9.1%	2.4%	8176
Cartago	76.2%	8.5%	5.5%	8.4%	1.4%	798
Casanare	74.7%	9.6%	5.7%	8.5%	1.4%	2146
Cauca	68.1%	12.1%	6.6%	10.6%	2.6%	8893
Cesar	72.7%	10.2%	6.4%	8.9%	1.8%	6129
Chocó	53.6%	15.8%	11.7%	13.3%	5.7%	2815
Chía	81.3%	5.9%	3.4%	8.9%	0.4%	959

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	68.8%	9.6%	6.2%	11.5%	3.9%	1135
Cundinamarca	76.3%	8.8%	5.2%	8.7%	1.1%	11860
Córdoba	67.3%	12.7%	7.9%	9.9%	2.2%	9412
Cúcuta	77.1%	8.8%	5.3%	8.1%	0.6%	5518
Dosquebradas	78.0%	6.9%	5.0%	9.3%	0.8%	1248
Duitama	85.1%	4.6%	4.9%	4.8%	0.6%	1037
Envigado	81.6%	5.3%	3.8%	8.7%	0.6%	1216
Facatativá	78.0%	6.8%	4.2%	10.7%	0.3%	1062
Florencia	71.1%	12.1%	5.6%	9.8%	1.4%	1475
Floridablanca	81.2%	6.3%	4.4%	7.4%	0.7%	1852
Fusagasugá	78.3%	7.9%	5.4%	8.1%	0.3%	1058
Girardot	72.6%	10.3%	6.4%	9.1%	1.5%	777
Girón	76.2%	10.3%	4.8%	8.3%	0.4%	1011
Guainía	100.0%	0.0%	0.0%	0.0%	0.0%	2
Guaviare	67.9%	13.5%	7.2%	8.5%	3.0%	710
Huila	73.6%	10.9%	5.3%	9.5%	0.8%	6415
Ibagué	77.0%	8.0%	5.1%	8.8%	1.1%	3972
Ipiales	79.6%	6.5%	5.0%	8.6%	0.3%	1014
Itagüí	73.9%	9.6%	5.7%	9.4%	1.4%	1365
Jamundí	73.4%	8.3%	6.2%	10.7%	1.5%	871
La Guajira	66.4%	12.2%	7.8%	10.2%	3.5%	2481
Lorica	63.1%	15.6%	7.4%	11.6%	2.4%	1141
Magangué	66.2%	13.0%	6.9%	11.4%	2.5%	1220
Magdalena	63.7%	14.2%	8.2%	10.0%	4.0%	6289
Maicao	61.8%	15.3%	8.4%	9.7%	4.8%	1425
Malambo	70.1%	10.2%	7.0%	10.6%	2.1%	953
Manizales	78.6%	6.8%	4.7%	9.3%	0.6%	2324
Medellín	73.7%	10.2%	6.3%	8.7%	1.1%	16107
Meta	72.5%	10.4%	6.3%	8.7%	2.1%	3976
Montería	71.1%	11.3%	6.1%	10.1%	1.4%	3793
Mosquera	79.3%	6.7%	4.7%	8.4%	0.9%	880
Nariño	73.9%	8.7%	5.4%	9.4%	2.7%	7283
Neiva	74.1%	10.7%	5.4%	9.0%	0.7%	3000
Norte de Santander	74.5%	9.9%	5.2%	9.5%	0.8%	5754
Palmira	78.3%	7.0%	5.0%	8.7%	1.0%	2080
Pasto	81.2%	6.2%	4.4%	7.8%	0.3%	3134
Pereira	78.9%	7.3%	4.4%	8.0%	1.4%	3510
Piedecuesta	78.2%	8.8%	4.1%	8.1%	0.8%	1103
Pitalito	76.3%	8.1%	5.4%	9.2%	0.9%	1277

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	75.9%	8.9%	5.2%	8.7%	1.3%	2100
Putumayo	72.7%	10.0%	5.9%	9.5%	1.9%	3241
Quibdó	61.8%	14.1%	8.3%	11.9%	3.8%	1068
Quindío	73.7%	10.6%	5.6%	9.3%	0.7%	2171
Riohacha	66.9%	13.6%	6.8%	10.6%	2.1%	1686
Rionegro	81.1%	7.2%	4.2%	7.0%	0.5%	838
Risaralda	73.9%	9.8%	5.8%	9.2%	1.2%	2244
Sabaneta	77.7%	9.1%	4.3%	8.8%	0.0%	373
Sahagún	71.1%	11.1%	6.7%	10.0%	1.0%	956
San Andrés	67.2%	14.3%	7.0%	10.4%	1.1%	454
Santa Marta	71.4%	11.2%	6.3%	8.9%	2.2%	4142
Santander	76.6%	8.6%	4.8%	9.3%	0.8%	6474
Sincelejo	73.6%	10.6%	5.4%	8.8%	1.7%	2541
Soacha	76.5%	8.7%	4.9%	9.2%	0.6%	4162
Sogamoso	81.1%	5.3%	5.1%	8.0%	0.5%	1088
Soledad	74.3%	9.9%	5.6%	9.4%	0.8%	3910
Sucre	66.4%	13.1%	7.8%	10.5%	2.2%	5581
Tolima	71.5%	11.9%	6.0%	9.1%	1.5%	7481
Tuluá	76.2%	8.9%	4.6%	9.4%	0.9%	1601
Tumaco	59.2%	14.9%	9.1%	11.3%	5.4%	1891
Tunja	81.6%	5.8%	4.2%	8.1%	0.2%	1342
Turbo	60.0%	14.6%	9.9%	11.4%	4.1%	1486
Uribia	58.6%	15.1%	11.9%	11.9%	2.5%	403
Valle del Cauca	76.8%	10.0%	4.7%	7.3%	1.2%	6241
Valledupar	73.3%	9.9%	5.5%	9.0%	2.3%	3540
Vaupés	60.0%	0.0%	20.0%	0.0%	20.0%	5
Vichada	67.0%	11.5%	6.3%	11.5%	3.7%	460
Villavicencio	79.0%	8.5%	4.2%	7.4%	0.9%	4039
Yopal	79.0%	8.5%	4.0%	7.7%	0.9%	1312
Yumbo	77.7%	9.0%	5.3%	7.2%	0.7%	941
Zipaquirá	77.7%	6.6%	4.7%	10.0%	1.0%	1026
Colombia	73.6%	9.8%	5.8%	9.1%	1.8%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

• Pregunta 7.

La profesora María tiene un curso de 35 estudiantes. Ella desea organizar el curso en grupos de igual número de estudiantes.

¿Cuántos estudiantes en total puede haber en cada grupo?

A. 3 estudiantes.
B. 4 estudiantes.
C. 5 estudiantes.
D. 6 estudiantes.

• Estructura

Competencia	Comunicación, representación y modelación
Componente	Numérico - variacional
Afirmación	Describir e interpretar propiedades y relaciones de los números y sus operaciones.
Nivel de desempeño	Mínimo
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	8.4%	10.2%	52.5%	24.8%	4.1%	785
Antioquia	6.0%	8.3%	63.1%	20.7%	1.9%	21528
Apartadó	8.4%	9.7%	61.7%	18.6%	1.5%	1235
Arauca	6.8%	9.1%	65.4%	16.9%	1.8%	2030
Armenia	6.5%	9.5%	66.4%	17.1%	0.6%	2026
Atlántico	8.8%	9.8%	58.2%	18.5%	4.7%	4445
Barrancabermeja	6.3%	8.9%	66.5%	16.5%	1.9%	1778
Barranquilla	7.1%	8.8%	68.3%	14.2%	1.6%	7999
Bello	6.9%	7.9%	65.6%	18.4%	1.3%	3080
Bogotá, D.C.	5.3%	7.3%	71.5%	13.4%	2.4%	52992
Bolívar	8.6%	11.6%	52.9%	22.8%	4.2%	7953
Boyacá	5.9%	7.2%	67.5%	18.2%	1.1%	7149
Bucaramanga	5.0%	6.5%	75.0%	12.7%	0.9%	3981
Buenaventura	6.0%	8.2%	63.7%	18.6%	3.5%	2559
Buga	5.6%	6.9%	66.3%	16.2%	5.0%	864
Caldas	5.3%	6.9%	68.7%	17.8%	1.3%	4335
Cali	6.7%	8.5%	66.5%	15.8%	2.5%	14284
Caquetá	7.0%	8.2%	61.7%	21.1%	2.0%	2306
Cartagena	7.9%	9.6%	62.4%	17.3%	2.8%	8176
Cartago	5.1%	9.4%	66.0%	17.7%	1.8%	798
Casanare	6.2%	9.1%	64.7%	18.3%	1.7%	2146
Cauca	6.0%	7.1%	62.4%	21.3%	3.2%	8893
Cesar	7.2%	8.7%	62.1%	19.6%	2.3%	6129
Chocó	8.0%	11.1%	50.8%	24.1%	6.0%	2815
Chía	4.8%	6.7%	74.3%	13.5%	0.7%	959
Ciénaga	6.5%	9.2%	62.5%	17.7%	4.1%	1135
Cundinamarca	4.8%	7.0%	71.8%	15.3%	1.1%	11860
Córdoba	8.5%	10.3%	55.6%	23.1%	2.5%	9412
Cúcuta	6.5%	7.9%	68.9%	15.7%	1.0%	5518
Dosquebradas	6.3%	7.7%	70.0%	14.7%	1.2%	1248
Duitama	4.2%	7.1%	77.8%	9.9%	0.9%	1037
Envigado	4.4%	6.2%	76.8%	12.0%	0.6%	1216
Facatativá	7.0%	7.3%	69.7%	15.6%	0.5%	1062
Florencia	7.9%	8.3%	67.6%	14.4%	1.8%	1475
Floridablanca	4.3%	6.3%	75.8%	12.6%	1.0%	1852
Fusagasugá	5.8%	6.0%	73.1%	14.2%	1.0%	1058
Girardot	7.5%	8.0%	67.4%	15.1%	2.1%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	6.4%	7.8%	67.4%	17.6%	0.8%	1011
Guainía	50.0%	0.0%	0.0%	50.0%	0.0%	2
Guaviare	5.4%	8.7%	59.6%	22.7%	3.7%	710
Huila	5.8%	7.7%	66.0%	19.4%	1.1%	6415
Ibagué	6.2%	8.2%	69.9%	14.5%	1.3%	3972
Ipiales	4.4%	7.3%	70.7%	16.7%	0.9%	1014
Itagüí	6.4%	9.5%	63.4%	19.1%	1.5%	1365
Jamundí	8.0%	9.6%	59.2%	20.6%	2.5%	871
La Guajira	6.7%	10.9%	59.7%	19.2%	3.5%	2481
Lorica	9.0%	11.4%	54.5%	22.4%	2.6%	1141
Magangué	7.5%	11.0%	56.6%	21.1%	3.8%	1220
Magdalena	7.7%	10.4%	55.3%	21.8%	4.7%	6289
Maicao	8.8%	10.2%	56.0%	19.9%	5.1%	1425
Malambo	8.2%	8.5%	63.8%	15.9%	3.6%	953
Manizales	6.6%	6.5%	69.6%	16.3%	1.0%	2324
Medellín	7.2%	9.8%	63.7%	17.8%	1.4%	16107
Meta	7.0%	10.2%	61.3%	19.0%	2.6%	3976
Montería	9.0%	10.2%	60.3%	19.1%	1.5%	3793
Mosquera	6.4%	5.7%	72.5%	14.4%	1.0%	880
Nariño	4.8%	6.9%	68.2%	16.9%	3.1%	7283
Neiva	7.3%	8.0%	67.0%	16.5%	1.3%	3000
Norte de Santander	6.0%	6.9%	69.8%	16.2%	1.1%	5754
Palmira	6.3%	7.5%	67.5%	17.5%	1.2%	2080
Pasto	5.3%	7.2%	73.1%	14.0%	0.4%	3134
Pereira	5.1%	7.6%	69.8%	15.7%	1.8%	3510
Piedecuesta	5.2%	8.2%	69.6%	15.5%	1.5%	1103
Pitalito	6.3%	7.8%	66.0%	18.2%	1.6%	1277
Popayán	4.5%	7.1%	73.2%	13.2%	1.9%	2100
Putumayo	7.6%	7.9%	63.3%	19.3%	1.9%	3241
Quibdó	8.6%	10.7%	55.0%	21.5%	4.2%	1068
Quindío	6.0%	9.6%	64.4%	19.0%	1.0%	2171
Riohacha	8.5%	8.8%	59.1%	20.8%	2.8%	1686
Rionegro	5.5%	6.4%	71.5%	16.1%	0.5%	838
Risaralda	5.2%	8.3%	63.6%	21.4%	1.5%	2244
Sabaneta	6.4%	7.0%	74.0%	11.5%	1.1%	373
Sahagún	9.6%	11.7%	54.3%	23.4%	0.9%	956
San Andrés	9.7%	14.5%	52.0%	22.0%	1.8%	454
Santa Marta	7.5%	8.3%	66.9%	14.9%	2.5%	4142
Santander	5.8%	5.8%	69.4%	17.9%	1.2%	6474

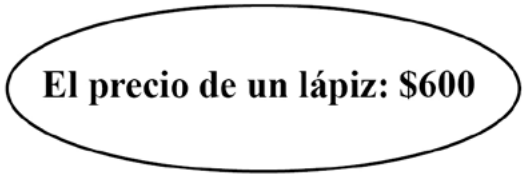
Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	8.2%	9.9%	61.6%	18.6%	1.8%	2541
Soacha	6.3%	7.0%	70.6%	15.2%	0.9%	4162
Sogamoso	6.2%	6.2%	74.2%	13.0%	0.6%	1088
Soledad	7.9%	8.4%	67.8%	14.9%	0.9%	3910
Sucre	9.4%	10.6%	55.2%	22.5%	2.4%	5581
Tolima	6.5%	8.0%	64.3%	19.3%	1.8%	7481
Tuluá	6.9%	8.1%	65.1%	18.7%	1.1%	1601
Tumaco	8.5%	12.0%	53.5%	19.5%	6.5%	1891
Tunja	6.2%	6.2%	73.0%	14.0%	0.6%	1342
Turbo	7.1%	9.6%	55.9%	22.4%	5.0%	1486
Uribia	6.2%	10.9%	51.1%	27.5%	4.2%	403
Valle del Cauca	6.3%	9.1%	63.3%	19.8%	1.5%	6241
Valledupar	8.3%	8.2%	62.8%	18.1%	2.6%	3540
Vaupés	0.0%	0.0%	40.0%	40.0%	20.0%	5
Vichada	7.8%	8.0%	57.8%	22.2%	4.1%	460
Villavicencio	6.6%	7.7%	69.6%	14.8%	1.3%	4039
Yopal	6.4%	7.2%	69.6%	15.5%	1.3%	1312
Yumbo	8.0%	10.2%	62.2%	18.4%	1.3%	941
Zipaquirá	5.9%	6.2%	75.0%	11.5%	1.4%	1026
Colombia	6.5%	8.3%	65.6%	17.4%	2.1%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 8.**

Observa el siguiente aviso:



¿Cuál de las siguientes tablas representa correctamente el precio de 2, 3 y 4 lápices?

A.

Número de lápices	Precio ($)
2	600
3	700
4	800

B.

Número de lápices	Precio ($)
2	620
3	630
4	640

C.

Número de lápices	Precio ($)
2	1.200
3	1.800
4	2.400

D.

Número de lápices	Precio ($)
2	1.200
3	2.400
4	4.800

- **Estructura**

Competencia	Planteamiento y resolución de problemas
Componente	Numérico - variacional
Afirmación	Resolver y formular problemas multiplicativos rutinarios y no rutinarios de adición repetida, factor multiplicante, razón y producto cartesiano.
Nivel de desempeño	Mínimo
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	27.0%	8.5%	43.7%	16.6%	4.2%	785
Antioquia	16.5%	5.4%	59.5%	16.8%	1.8%	21528
Apartadó	18.9%	6.8%	54.7%	17.7%	1.9%	1235
Arauca	13.9%	5.3%	63.4%	15.2%	2.2%	2030
Armenia	14.3%	5.7%	64.8%	14.3%	0.9%	2026
Atlántico	21.6%	7.4%	49.3%	17.1%	4.5%	4445
Barrancabermeja	16.8%	5.6%	59.7%	16.3%	1.7%	1778
Barranquilla	17.5%	5.7%	60.8%	14.4%	1.7%	7999
Bello	11.8%	5.3%	67.4%	14.3%	1.4%	3080
Bogotá, D.C.	10.2%	3.9%	70.6%	12.8%	2.6%	52992
Bolívar	26.1%	9.0%	44.1%	16.8%	4.0%	7953
Boyacá	11.5%	4.8%	66.9%	15.6%	1.2%	7149
Bucaramanga	9.4%	3.2%	73.1%	13.4%	0.9%	3981
Buenaventura	21.1%	6.3%	53.8%	15.5%	3.2%	2559
Buga	13.8%	6.1%	61.9%	14.0%	4.2%	864
Caldas	13.2%	4.5%	65.3%	15.8%	1.2%	4335
Cali	14.6%	5.1%	64.5%	13.2%	2.6%	14284
Caquetá	16.7%	7.1%	56.9%	17.0%	2.3%	2306
Cartagena	20.0%	6.7%	56.1%	14.5%	2.7%	8176
Cartago	12.5%	4.6%	68.2%	12.7%	2.0%	798
Casanare	14.6%	4.8%	62.2%	17.0%	1.4%	2146
Cauca	18.3%	5.5%	57.6%	15.4%	3.2%	8893
Cesar	20.4%	6.1%	55.6%	15.6%	2.3%	6129
Chocó	26.9%	8.2%	42.4%	16.7%	5.8%	2815
Chía	8.2%	3.5%	73.8%	13.7%	0.7%	959
Ciénaga	22.8%	5.6%	52.2%	15.2%	4.1%	1135
Cundinamarca	10.3%	4.2%	70.4%	13.7%	1.4%	11860
Córdoba	23.8%	8.4%	48.2%	16.7%	2.9%	9412
Cúcuta	13.2%	4.7%	66.6%	14.2%	1.2%	5518
Dosquebradas	10.7%	3.9%	72.4%	12.1%	0.8%	1248
Duitama	7.3%	2.9%	79.2%	9.9%	0.7%	1037
Envigado	7.8%	2.5%	76.8%	12.3%	0.6%	1216
Facatativá	7.9%	4.0%	74.2%	13.7%	0.2%	1062
Florencia	17.5%	5.4%	59.9%	15.3%	2.0%	1475
Floridablanca	8.7%	4.1%	73.8%	12.6%	0.8%	1852
Fusagasugá	10.4%	4.0%	70.2%	14.2%	1.2%	1058
Girardot	17.0%	6.2%	60.7%	13.5%	2.6%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	11.3%	5.0%	68.2%	14.8%	0.6%	1011
Guainía	100.0%	0.0%	0.0%	0.0%	0.0%	2
Guaviare	17.0%	6.1%	55.2%	17.9%	3.8%	710
Huila	15.8%	4.6%	62.6%	15.6%	1.3%	6415
Ibagué	11.8%	3.8%	70.6%	12.6%	1.3%	3972
Ipiales	10.2%	3.0%	71.7%	14.0%	1.2%	1014
Itagüí	13.0%	7.0%	62.6%	15.5%	2.0%	1365
Jamundí	18.4%	5.2%	59.5%	15.0%	2.0%	871
La Guajira	20.0%	6.5%	52.3%	16.9%	4.3%	2481
Lorica	25.1%	9.4%	43.8%	18.3%	3.4%	1141
Magangué	27.0%	7.0%	47.4%	14.8%	3.7%	1220
Magdalena	26.7%	8.6%	44.3%	15.6%	4.8%	6289
Maicao	20.6%	8.4%	47.7%	17.5%	5.9%	1425
Malambo	20.7%	5.7%	56.6%	14.3%	2.8%	953
Manizales	11.0%	4.0%	70.3%	13.9%	0.9%	2324
Medellín	14.0%	6.1%	63.4%	15.1%	1.5%	16107
Meta	14.2%	5.1%	60.5%	17.6%	2.6%	3976
Montería	20.5%	7.2%	56.6%	13.9%	1.8%	3793
Mosquera	8.3%	4.2%	75.6%	10.8%	1.1%	880
Nariño	15.4%	5.0%	62.1%	14.2%	3.3%	7283
Neiva	15.6%	5.7%	63.1%	14.4%	1.2%	3000
Norte de Santander	14.1%	5.2%	64.4%	15.1%	1.2%	5754
Palmira	13.2%	4.9%	67.3%	13.1%	1.6%	2080
Pasto	11.2%	4.0%	70.9%	13.1%	0.8%	3134
Pereira	11.3%	3.9%	69.6%	13.6%	1.6%	3510
Piedecuesta	11.8%	4.4%	68.8%	13.7%	1.3%	1103
Pitalito	14.6%	4.9%	63.4%	15.8%	1.3%	1277
Popayán	9.4%	4.3%	71.6%	13.1%	1.6%	2100
Putumayo	17.6%	6.6%	57.9%	15.4%	2.4%	3241
Quibdó	22.8%	7.4%	47.2%	18.8%	3.8%	1068
Quindío	14.3%	6.5%	62.0%	15.8%	1.3%	2171
Riohacha	20.9%	7.4%	49.6%	19.4%	2.7%	1686
Rionegro	10.0%	3.9%	71.7%	13.6%	0.7%	838
Risaralda	17.2%	5.6%	61.4%	14.0%	1.7%	2244
Sabaneta	9.7%	4.6%	70.0%	15.3%	0.5%	373
Sahagún	20.8%	7.8%	51.9%	18.2%	1.3%	956
San Andrés	18.7%	10.4%	48.9%	19.4%	2.6%	454
Santa Marta	19.7%	6.0%	57.6%	14.2%	2.5%	4142
Santander	11.4%	3.8%	69.0%	14.5%	1.2%	6474

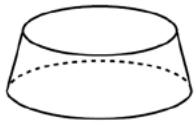
Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	19.8%	5.7%	56.2%	16.1%	2.3%	2541
Soacha	11.3%	4.6%	69.8%	13.4%	0.9%	4162
Sogamoso	7.3%	2.4%	77.4%	12.0%	0.9%	1088
Soledad	18.4%	5.2%	61.7%	13.3%	1.4%	3910
Sucre	25.1%	7.8%	47.2%	17.2%	2.7%	5581
Tolima	16.1%	5.6%	61.2%	15.3%	1.9%	7481
Tuluá	12.7%	5.1%	68.0%	13.4%	0.8%	1601
Tumaco	26.1%	9.8%	42.7%	15.3%	6.2%	1891
Tunja	7.4%	3.3%	76.2%	11.9%	1.3%	1342
Turbo	25.6%	9.2%	42.5%	17.4%	5.3%	1486
Uribia	26.8%	9.2%	38.5%	20.8%	4.7%	403
Valle del Cauca	15.0%	5.5%	61.6%	16.2%	1.6%	6241
Valledupar	20.5%	5.3%	57.5%	13.8%	2.9%	3540
Vaupés	0.0%	60.0%	0.0%	0.0%	40.0%	5
Vichada	17.6%	6.3%	53.9%	17.6%	4.6%	460
Villavicencio	10.6%	4.3%	70.4%	13.4%	1.3%	4039
Yopal	11.6%	3.9%	67.1%	15.6%	1.8%	1312
Yumbo	17.6%	6.1%	62.1%	13.3%	1.0%	941
Zipaquirá	8.6%	3.6%	72.6%	13.4%	1.9%	1026
Colombia	15.4%	5.4%	62.2%	14.7%	2.2%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

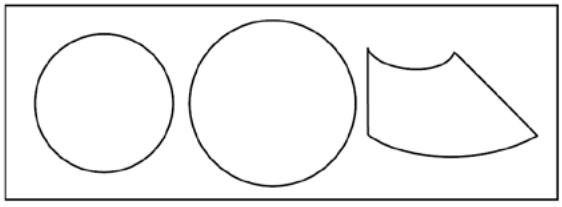
- **Pregunta 9.**

En la clase de geometría, se quiere construir un sólido como el siguiente, pegando tres piezas:

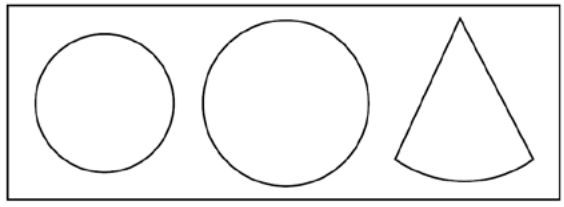


¿Cuál de los siguientes grupos de piezas debe utilizarse en la construcción del sólido?

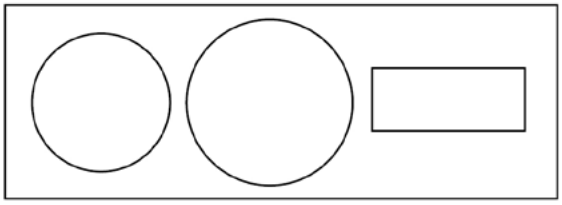
A.



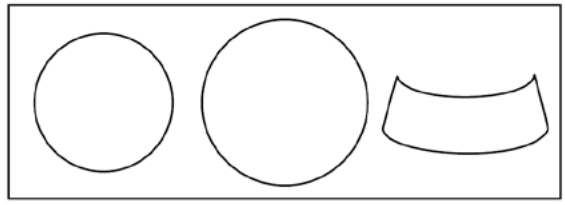
B.



C.



D.



- **Estructura**

Competencia	Razonamiento y argumentación
Componente	Geométrico - métrico
Afirmación	Construir y descomponer figuras planas y sólidos a partir de condiciones dadas
Nivel de desempeño	Mínimo
Respuesta correcta	D

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	12.6%	9.9%	6.8%	66.2%	4.5%	785
Antioquia	10.8%	7.7%	5.3%	74.7%	1.6%	21528
Apartadó	12.6%	8.3%	8.0%	69.7%	1.4%	1235
Arauca	9.5%	8.2%	4.5%	76.4%	1.4%	2030
Armenia	10.4%	6.1%	4.3%	78.8%	0.4%	2026
Atlántico	11.5%	8.9%	6.6%	69.3%	3.6%	4445
Barrancabermeja	10.7%	6.6%	5.0%	76.7%	1.0%	1778
Barranquilla	9.9%	7.3%	4.1%	77.3%	1.4%	7999
Bello	9.6%	4.9%	4.2%	80.3%	1.0%	3080
Bogotá, D.C.	7.9%	4.6%	3.8%	81.6%	2.2%	52992
Bolívar	15.3%	11.8%	7.7%	62.1%	3.0%	7953
Boyacá	10.2%	7.9%	5.1%	75.9%	0.9%	7149
Bucaramanga	7.1%	5.5%	3.5%	83.2%	0.7%	3981
Buenaventura	11.4%	8.7%	5.8%	71.7%	2.5%	2559
Buga	7.8%	6.6%	3.2%	78.7%	3.7%	864
Caldas	9.7%	6.8%	4.2%	78.4%	1.0%	4335
Cali	9.1%	6.0%	4.2%	78.6%	2.0%	14284
Caquetá	12.5%	11.0%	6.4%	68.3%	1.8%	2306
Cartagena	11.6%	8.0%	5.8%	72.5%	2.0%	8176
Cartago	10.0%	6.6%	4.9%	77.4%	1.0%	798
Casanare	10.0%	8.8%	5.4%	74.5%	1.4%	2146
Cauca	11.9%	9.0%	6.6%	70.1%	2.5%	8893
Cesar	10.2%	8.9%	5.9%	73.4%	1.7%	6129
Chocó	16.7%	13.3%	9.4%	56.0%	4.6%	2815
Chía	7.6%	5.5%	3.5%	83.1%	0.2%	959
Ciénaga	9.0%	8.4%	6.4%	72.4%	3.8%	1135
Cundinamarca	8.6%	6.2%	4.4%	79.8%	1.0%	11860
Córdoba	13.9%	11.5%	7.6%	64.9%	2.0%	9412
Cúcuta	9.0%	6.9%	4.4%	78.9%	0.7%	5518
Dosquebradas	8.7%	3.7%	3.4%	83.7%	0.6%	1248
Duitama	5.6%	4.2%	4.0%	85.8%	0.4%	1037
Envigado	7.9%	3.7%	4.7%	83.6%	0.2%	1216
Facatativá	8.1%	4.9%	4.5%	82.2%	0.3%	1062
Florencia	10.1%	7.3%	5.3%	76.0%	1.4%	1475
Floridablanca	7.5%	5.1%	3.5%	82.7%	1.3%	1852
Fusagasugá	7.8%	6.2%	3.9%	81.4%	0.7%	1058
Girardot	12.6%	6.0%	4.1%	75.5%	1.7%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	8.0%	5.4%	3.9%	82.2%	0.5%	1011
Guainía	0.0%	0.0%	0.0%	100.0%	0.0%	2
Guaviare	9.6%	9.7%	6.8%	70.4%	3.5%	710
Huila	9.4%	7.7%	5.5%	76.6%	0.8%	6415
Ibagué	8.7%	5.2%	4.1%	81.3%	0.8%	3972
Ipiales	8.9%	5.9%	4.2%	80.3%	0.7%	1014
Itagüí	12.1%	9.1%	4.4%	73.2%	1.2%	1365
Jamundí	9.0%	8.5%	5.2%	75.9%	1.5%	871
La Guajira	13.3%	9.4%	6.8%	67.9%	2.6%	2481
Lorica	14.2%	11.7%	8.3%	63.6%	2.1%	1141
Magangué	13.7%	9.9%	7.5%	66.5%	2.4%	1220
Magdalena	13.3%	11.1%	7.8%	63.9%	3.9%	6289
Maicao	12.8%	11.0%	7.6%	63.1%	5.5%	1425
Malambo	11.1%	5.7%	6.1%	74.5%	2.6%	953
Manizales	8.7%	4.6%	3.4%	82.9%	0.3%	2324
Medellín	11.3%	6.8%	5.1%	75.8%	1.1%	16107
Meta	10.4%	8.8%	5.2%	73.5%	2.1%	3976
Montería	11.8%	9.5%	6.2%	71.1%	1.4%	3793
Mosquera	7.0%	5.2%	4.1%	83.0%	0.7%	880
Nariño	9.6%	7.8%	6.0%	73.9%	2.7%	7283
Neiva	9.9%	7.5%	4.0%	77.7%	0.8%	3000
Norte de Santander	9.2%	7.4%	5.4%	77.3%	0.7%	5754
Palmira	8.7%	6.2%	3.7%	80.4%	1.0%	2080
Pasto	7.0%	5.6%	4.1%	82.9%	0.4%	3134
Pereira	8.0%	5.4%	3.8%	81.5%	1.2%	3510
Piedecuesta	8.3%	4.6%	3.5%	82.3%	1.2%	1103
Pitalito	9.5%	6.9%	5.2%	77.2%	1.2%	1277
Popayán	7.1%	6.0%	4.0%	81.7%	1.2%	2100
Putumayo	10.4%	9.5%	5.7%	72.9%	1.5%	3241
Quibdó	13.4%	10.5%	6.7%	65.4%	4.0%	1068
Quindío	10.1%	6.0%	5.1%	78.0%	0.8%	2171
Riohacha	12.6%	10.2%	8.4%	65.7%	3.1%	1686
Rionegro	8.1%	5.3%	4.1%	82.2%	0.4%	838
Risaralda	9.5%	7.4%	4.6%	77.0%	1.3%	2244
Sabaneta	9.9%	4.3%	4.0%	81.8%	0.0%	373
Sahagún	13.2%	9.9%	6.7%	69.2%	0.9%	956
San Andrés	15.0%	12.6%	5.9%	61.2%	5.3%	454
Santa Marta	10.6%	8.6%	5.0%	73.3%	2.5%	4142
Santander	8.6%	7.4%	4.8%	78.5%	0.8%	6474

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	10.0%	8.0%	5.3%	75.1%	1.6%	2541
Soacha	9.1%	6.1%	3.7%	80.6%	0.6%	4162
Sogamoso	8.8%	5.1%	3.5%	82.4%	0.3%	1088
Soledad	9.6%	6.9%	4.1%	78.4%	0.9%	3910
Sucre	14.4%	11.3%	7.5%	64.6%	2.2%	5581
Tolima	10.4%	9.0%	5.7%	73.4%	1.4%	7481
Tuluá	8.1%	6.5%	3.2%	80.8%	1.3%	1601
Tumaco	13.6%	11.6%	7.9%	61.2%	5.6%	1891
Tunja	7.3%	6.1%	3.9%	82.2%	0.5%	1342
Turbo	15.1%	10.9%	8.0%	61.6%	4.3%	1486
Uribia	17.1%	18.4%	11.4%	49.9%	3.2%	403
Valle del Cauca	10.2%	7.0%	5.0%	76.3%	1.5%	6241
Valledupar	10.9%	7.9%	4.9%	74.0%	2.3%	3540
Vaupés	20.0%	0.0%	0.0%	60.0%	20.0%	5
Vichada	11.7%	11.7%	8.5%	64.1%	3.9%	460
Villavicencio	8.3%	6.0%	3.9%	80.8%	1.0%	4039
Yopal	8.7%	7.4%	4.3%	78.6%	1.1%	1312
Yumbo	9.5%	7.3%	4.1%	77.9%	1.2%	941
Zipaquirá	8.6%	5.2%	4.6%	80.8%	0.9%	1026
Colombia	10.1%	7.4%	5.1%	75.7%	1.7%	366782

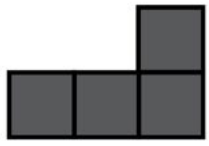
*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

• Pregunta 10

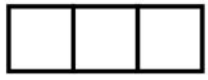
Camilo observó un sólido desde distintas posiciones. Esto fue lo que Camilo observó:

Desde el lado.

Desde el frente.

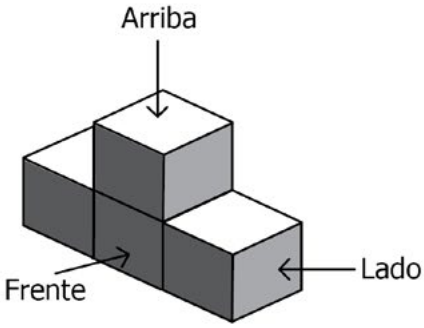


Desde arriba.

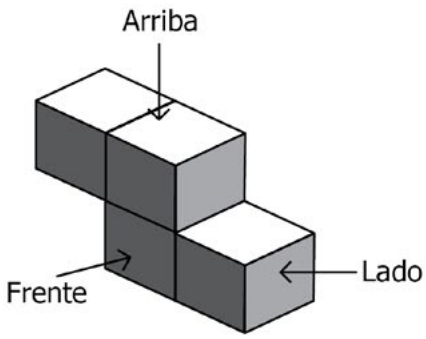


¿Cuál de los siguientes sólidos observó Camilo?

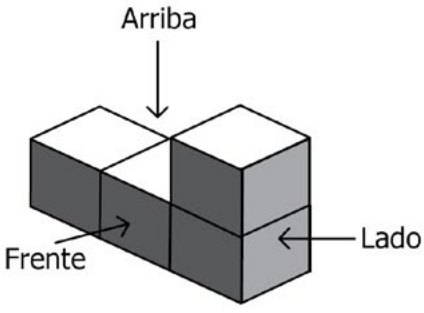
A.



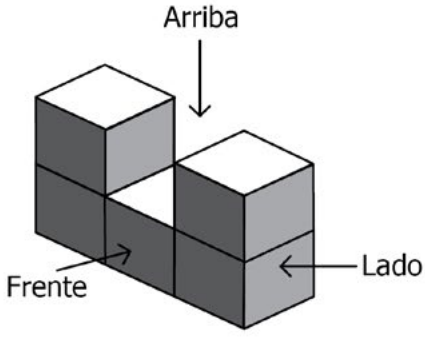
B.



C.



D.



• Estructura

Competencia	Razonamiento y argumentación
Componente	Geométrico - métrico
Afirmación	Relacionar objetos tridimensionales y sus propiedades con sus respectivos desarrollos planos.
Nivel de desempeño	Mínimo
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	11.2%	12.2%	58.7%	13.2%	4.6%	785
Antioquia	10.1%	9.9%	63.7%	14.5%	1.7%	21528
Apartadó	10.3%	10.2%	61.3%	16.4%	1.9%	1235
Arauca	10.0%	8.1%	66.0%	14.3%	1.5%	2030
Armenia	9.1%	8.7%	68.3%	13.2%	0.6%	2026
Atlántico	11.3%	11.5%	58.9%	14.5%	3.7%	4445
Barrancabermeja	9.1%	9.4%	67.3%	13.2%	1.0%	1778
Barranquilla	9.0%	8.7%	66.6%	14.2%	1.5%	7999
Bello	7.8%	8.3%	68.7%	14.0%	1.1%	3080
Bogotá, D.C.	5.7%	5.7%	74.8%	11.6%	2.3%	52992
Bolívar	14.0%	14.8%	53.1%	14.7%	3.3%	7953
Boyacá	9.1%	9.8%	64.9%	15.2%	0.9%	7149
Bucaramanga	5.8%	6.2%	74.5%	13.1%	0.5%	3981
Buenaventura	11.2%	10.7%	60.0%	15.1%	2.9%	2559
Buga	8.8%	7.3%	69.0%	11.1%	3.8%	864
Caldas	8.7%	8.1%	67.9%	14.2%	1.1%	4335
Cali	7.4%	7.9%	69.9%	12.5%	2.2%	14284
Caquetá	10.4%	11.5%	60.4%	16.0%	1.7%	2306
Cartagena	9.9%	10.2%	63.9%	13.7%	2.3%	8176
Cartago	7.6%	8.1%	69.8%	13.2%	1.3%	798
Casanare	10.6%	9.2%	64.9%	13.8%	1.4%	2146
Cauca	11.2%	10.0%	61.9%	14.1%	2.7%	8893
Cesar	11.3%	10.4%	62.2%	14.3%	1.8%	6129
Chocó	15.2%	13.9%	50.3%	15.1%	5.4%	2815
Chía	4.3%	5.6%	80.0%	9.6%	0.5%	959

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	9.1%	10.7%	63.8%	12.3%	4.1%	1135
Cundinamarca	6.3%	7.2%	71.9%	13.5%	1.1%	11860
Córdoba	13.1%	12.2%	58.4%	14.1%	2.3%	9412
Cúcuta	8.6%	7.9%	66.7%	16.1%	0.8%	5518
Dosquebradas	4.8%	6.7%	74.0%	13.6%	0.9%	1248
Duitama	4.3%	6.7%	77.5%	10.9%	0.6%	1037
Envigado	5.8%	6.0%	81.3%	6.7%	0.2%	1216
Facatativá	6.9%	6.2%	74.1%	12.6%	0.2%	1062
Florencia	9.4%	11.5%	62.1%	15.2%	1.8%	1475
Floridablanca	6.5%	6.3%	74.3%	11.8%	1.1%	1852
Fusagasugá	7.4%	6.9%	71.9%	13.4%	0.4%	1058
Girardot	9.1%	9.9%	65.9%	13.1%	1.9%	777
Girón	7.1%	8.1%	68.3%	15.9%	0.5%	1011
Guainía	0.0%	50.0%	50.0%	0.0%	0.0%	2
Guaviare	9.4%	10.3%	62.4%	14.8%	3.1%	710
Huila	9.1%	8.8%	66.8%	14.5%	0.9%	6415
Ibagué	7.2%	9.1%	69.3%	13.3%	1.1%	3972
Ipiales	5.9%	8.4%	72.9%	12.5%	0.3%	1014
Itagüí	8.1%	10.4%	66.6%	13.5%	1.4%	1365
Jamundí	8.7%	9.8%	66.1%	13.9%	1.5%	871
La Guajira	10.2%	13.5%	59.6%	13.9%	2.8%	2481
Lorica	12.9%	13.4%	55.5%	16.0%	2.3%	1141
Magangué	12.0%	13.5%	57.5%	13.9%	3.0%	1220
Magdalena	13.8%	13.7%	54.6%	13.9%	4.0%	6289
Maicao	12.1%	12.1%	55.8%	14.4%	5.6%	1425
Malambo	10.2%	10.3%	62.3%	14.8%	2.4%	953
Manizales	6.2%	7.1%	72.5%	13.8%	0.4%	2324
Medellín	9.0%	9.9%	66.0%	13.9%	1.2%	16107
Meta	9.0%	10.2%	63.9%	14.7%	2.2%	3976
Montería	10.9%	11.1%	62.2%	14.4%	1.3%	3793
Mosquera	4.7%	5.0%	75.5%	13.9%	1.0%	880
Nariño	8.5%	9.0%	65.8%	13.9%	2.7%	7283
Neiva	8.3%	9.0%	67.2%	14.7%	0.9%	3000
Norte de Santander	9.6%	9.5%	65.3%	14.8%	0.9%	5754
Palmira	7.6%	7.5%	70.6%	13.2%	1.2%	2080
Pasto	6.7%	7.7%	72.9%	12.0%	0.7%	3134
Pereira	6.7%	7.4%	70.8%	13.7%	1.4%	3510
Piedecuesta	7.0%	9.1%	67.5%	15.6%	0.9%	1103
Pitalito	9.2%	9.3%	65.2%	15.0%	1.3%	1277

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	6.5%	6.7%	72.0%	13.6%	1.3%	2100
Putumayo	10.1%	10.8%	60.6%	17.1%	1.5%	3241
Quibdó	11.7%	12.1%	56.3%	16.7%	3.3%	1068
Quindío	9.4%	10.0%	64.8%	14.9%	0.9%	2171
Riohacha	11.7%	12.1%	58.4%	15.1%	2.6%	1686
Rionegro	4.5%	6.9%	74.8%	13.1%	0.6%	838
Risaralda	9.2%	8.6%	66.3%	14.4%	1.5%	2244
Sabaneta	6.2%	4.8%	78.3%	10.5%	0.3%	373
Sahagún	11.8%	12.6%	60.3%	14.3%	1.0%	956
San Andrés	9.9%	13.4%	58.6%	13.0%	5.1%	454
Santa Marta	9.8%	9.2%	66.1%	12.5%	2.5%	4142
Santander	7.6%	7.6%	68.6%	15.2%	1.0%	6474
Sincelejo	9.6%	11.2%	61.6%	16.1%	1.5%	2541
Soacha	7.6%	7.0%	71.2%	13.4%	0.8%	4162
Sogamoso	5.7%	6.4%	74.9%	12.6%	0.4%	1088
Soledad	9.0%	9.2%	67.1%	13.7%	1.0%	3910
Sucre	12.5%	13.4%	57.0%	14.8%	2.3%	5581
Tolima	10.3%	10.3%	62.2%	15.8%	1.4%	7481
Tuluá	7.0%	7.9%	70.3%	13.6%	1.1%	1601
Tumaco	13.0%	12.8%	53.0%	15.3%	5.9%	1891
Tunja	6.7%	5.8%	74.4%	12.5%	0.6%	1342
Turbo	13.8%	13.5%	53.9%	14.1%	4.7%	1486
Uribia	16.6%	16.4%	47.6%	16.6%	2.7%	403
Valle del Cauca	8.5%	8.6%	66.6%	14.7%	1.6%	6241
Valledupar	10.9%	9.3%	64.4%	12.6%	2.7%	3540
Vaupés	20.0%	0.0%	20.0%	40.0%	20.0%	5
Vichada	12.4%	10.2%	58.9%	13.5%	5.0%	460
Villavicencio	7.3%	7.8%	70.2%	13.8%	1.0%	4039
Yopal	7.2%	7.4%	69.7%	14.6%	1.1%	1312
Yumbo	8.8%	9.4%	67.6%	13.3%	1.0%	941
Zipaquirá	5.4%	7.9%	73.0%	12.7%	1.1%	1026
Colombia	8.8%	9.0%	66.5%	13.7%	1.9%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 11.**

En la figura 1 se representa una pieza que tiene forma de trapecio.

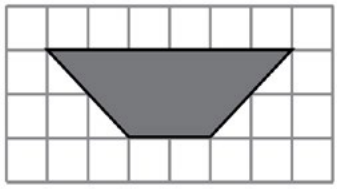
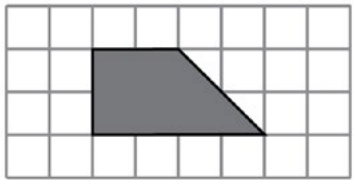


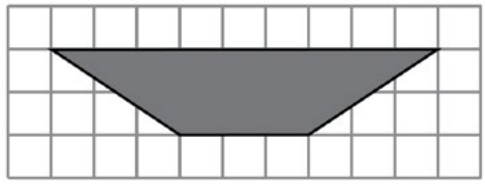
Figura 1

¿Con cuál de las siguientes piezas puede cubrirse exactamente la pieza de la figura 1?

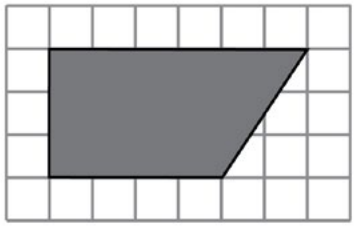
A.



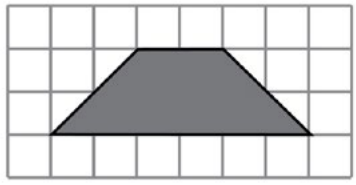
B.



C.



D.



- **Estructura**

Competencia	Razonamiento y argumentación
Componente	Geométrico - métrico
Afirmación	Justificar relaciones de semejanza y congruencia entre figuras
Nivel de desempeño	Mínimo
Respuesta correcta	D

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	6.5%	21.8%	8.2%	58.7%	4.8%	785
Antioquia	3.7%	22.1%	6.0%	66.3%	2.0%	21528
Apartadó	4.7%	22.1%	6.4%	64.9%	1.9%	1235
Arauca	3.8%	23.5%	5.3%	65.6%	1.8%	2030
Armenia	4.8%	21.0%	6.6%	67.0%	0.6%	2026
Atlántico	4.2%	25.8%	7.6%	58.0%	4.5%	4445
Barrancabermeja	3.5%	24.3%	6.2%	64.2%	1.8%	1778
Barranquilla	3.5%	23.8%	5.5%	65.4%	1.8%	7999
Bello	3.3%	24.9%	6.1%	64.3%	1.4%	3080
Bogotá, D.C.	2.7%	23.3%	5.3%	66.3%	2.5%	52992
Bolívar	5.3%	25.5%	8.5%	56.7%	4.0%	7953
Boyacá	3.5%	23.3%	6.3%	65.9%	1.0%	7149
Bucaramanga	2.5%	21.5%	5.8%	69.4%	0.8%	3981
Buenaventura	3.5%	24.5%	5.9%	63.3%	2.8%	2559
Buga	2.1%	21.1%	5.3%	67.5%	4.1%	864
Caldas	2.7%	20.1%	5.1%	70.9%	1.2%	4335
Cali	3.1%	22.1%	5.6%	66.7%	2.4%	14284
Caquetá	4.4%	22.9%	6.4%	64.3%	2.0%	2306
Cartagena	4.2%	24.1%	6.2%	62.9%	2.6%	8176
Cartago	3.6%	22.2%	6.9%	65.9%	1.4%	798
Casanare	3.1%	25.8%	5.5%	64.0%	1.6%	2146
Cauca	3.9%	23.0%	6.0%	64.2%	2.9%	8893
Cesar	3.4%	23.5%	5.4%	65.4%	2.2%	6129
Chocó	5.8%	27.9%	9.0%	51.4%	5.9%	2815
Chía	3.9%	21.6%	5.6%	68.5%	0.4%	959
Ciénaga	2.6%	19.0%	5.9%	68.3%	4.2%	1135
Cundinamarca	2.7%	22.9%	4.8%	68.3%	1.2%	11860
Córdoba	4.4%	27.5%	6.9%	58.6%	2.7%	9412
Cúcuta	2.8%	23.9%	5.2%	67.1%	1.0%	5518
Dosquebradas	2.5%	20.8%	5.0%	70.9%	0.8%	1248
Duitama	3.1%	24.5%	6.4%	65.5%	0.6%	1037
Envigado	2.8%	22.2%	6.8%	67.8%	0.4%	1216
Facatativá	2.3%	23.4%	5.3%	68.4%	0.7%	1062
Florencia	4.4%	26.6%	4.7%	62.5%	1.8%	1475
Floridablanca	2.2%	23.0%	5.5%	68.0%	1.3%	1852
Fusagasugá	2.9%	23.3%	4.6%	68.3%	0.9%	1058
Girardot	3.5%	28.1%	5.7%	60.5%	2.3%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	3.5%	22.9%	4.5%	68.9%	0.2%	1011
Guainía	50.0%	50.0%	0.0%	0.0%	0.0%	2
Guaviare	4.2%	26.2%	8.3%	58.0%	3.2%	710
Huila	2.9%	25.3%	4.9%	66.0%	0.9%	6415
Ibagué	2.3%	23.1%	5.6%	67.7%	1.3%	3972
Ipiales	3.4%	19.2%	5.3%	70.9%	1.2%	1014
Itagüí	5.9%	24.0%	7.0%	61.6%	1.5%	1365
Jamundí	4.1%	20.1%	4.7%	68.5%	2.5%	871
La Guajira	4.4%	25.4%	7.1%	59.7%	3.4%	2481
Lorica	5.1%	25.9%	9.8%	55.5%	3.8%	1141
Magangué	3.8%	28.7%	5.9%	58.4%	3.2%	1220
Magdalena	4.9%	25.6%	7.4%	57.6%	4.5%	6289
Maicao	4.7%	27.0%	8.6%	54.0%	5.6%	1425
Malambo	3.4%	21.0%	5.9%	67.2%	2.6%	953
Manizales	2.1%	25.5%	5.1%	66.9%	0.5%	2324
Medellín	4.7%	24.3%	7.5%	62.1%	1.4%	16107
Meta	3.3%	24.6%	5.8%	63.7%	2.7%	3976
Montería	4.1%	26.2%	6.5%	61.6%	1.6%	3793
Mosquera	2.6%	21.5%	4.0%	71.1%	0.8%	880
Nariño	3.4%	18.9%	5.4%	69.3%	3.1%	7283
Neiva	3.0%	24.2%	4.4%	67.1%	1.3%	3000
Norte de Santander	2.8%	24.0%	5.0%	67.3%	1.0%	5754
Palmira	2.5%	21.8%	5.8%	68.7%	1.3%	2080
Pasto	2.8%	21.6%	5.3%	69.8%	0.6%	3134
Pereira	2.3%	21.1%	4.8%	70.4%	1.5%	3510
Piedecuesta	2.4%	22.7%	6.6%	67.3%	1.1%	1103
Pitalito	2.4%	24.4%	4.9%	66.0%	2.2%	1277
Popayán	3.3%	23.9%	4.8%	66.5%	1.6%	2100
Putumayo	4.2%	23.4%	6.6%	64.0%	1.8%	3241
Quibdó	4.9%	26.3%	7.2%	57.0%	4.6%	1068
Quindío	3.4%	23.0%	6.1%	66.4%	1.1%	2171
Riohacha	4.2%	26.9%	7.3%	58.5%	3.2%	1686
Rionegro	3.9%	25.1%	4.9%	65.2%	1.0%	838
Risaralda	3.3%	23.9%	5.4%	65.9%	1.5%	2244
Sabaneta	2.9%	25.5%	6.7%	64.9%	0.0%	373
Sahagún	3.5%	25.1%	5.5%	64.4%	1.5%	956
San Andrés	5.9%	24.9%	9.9%	54.2%	5.1%	454
Santa Marta	2.6%	25.2%	5.2%	64.1%	2.9%	4142
Santander	2.5%	22.4%	4.9%	69.0%	1.2%	6474

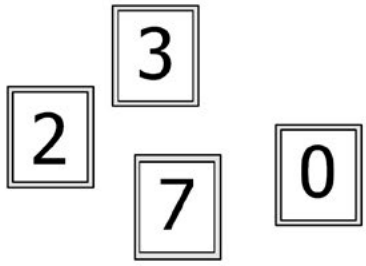
Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	3.7%	25.0%	5.8%	63.4%	2.1%	2541
Soacha	3.2%	23.5%	4.8%	67.7%	0.8%	4162
Sogamoso	2.3%	23.4%	5.2%	68.5%	0.6%	1088
Soledad	3.6%	24.0%	4.5%	66.5%	1.5%	3910
Sucre	4.6%	25.7%	7.1%	59.5%	3.1%	5581
Tolima	3.2%	25.9%	5.4%	63.6%	1.8%	7481
Tuluá	2.9%	22.4%	4.5%	69.1%	1.2%	1601
Tumaco	5.7%	24.1%	8.3%	55.1%	6.9%	1891
Tunja	2.8%	23.6%	4.8%	68.4%	0.3%	1342
Turbo	6.1%	25.4%	8.6%	54.0%	5.9%	1486
Uribia	4.5%	32.0%	8.2%	52.4%	3.0%	403
Valle del Cauca	3.6%	22.0%	5.1%	67.6%	1.7%	6241
Valledupar	3.1%	22.8%	5.5%	66.0%	2.5%	3540
Vaupés	0.0%	40.0%	20.0%	20.0%	20.0%	5
Vichada	4.8%	25.7%	8.9%	55.9%	4.8%	460
Villavicencio	2.9%	22.5%	5.1%	68.3%	1.1%	4039
Yopal	2.9%	22.8%	4.6%	68.6%	1.1%	1312
Yumbo	3.5%	24.5%	5.1%	65.8%	1.1%	941
Zipaquirá	2.2%	23.8%	5.2%	67.5%	1.3%	1026
Colombia	3.5%	23.6%	5.9%	64.9%	2.1%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 12.**

En la clase de matemáticas, la profesora Inés presenta las siguientes cuatro fichas marcadas con algunos dígitos para que los niños formen números:



¿Cuál es el mayor de los números de tres dígitos que los niños pueden formar con las fichas?

A. 327
B. 372
C. 732
D. 735

- **Estructura**

Competencia	Razonamiento y argumentación
Componente	Numérico - variacional
Afirmación	Usar y justificar propiedades (aditiva y posicional) del sistema de numeración decimal.
Nivel de desempeño	Satisfactorio
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	17.7%	12.5%	39.6%	24.1%	6.1%	785
Antioquia	15.2%	10.2%	50.7%	21.9%	2.0%	21528
Apartadó	16.3%	9.0%	50.4%	22.3%	2.0%	1235
Arauca	15.9%	8.5%	54.7%	19.0%	1.8%	2030
Armenia	12.3%	8.7%	61.1%	16.8%	1.1%	2026
Atlántico	19.1%	10.4%	44.0%	22.0%	4.5%	4445
Barrancabermeja	15.5%	8.7%	52.0%	21.9%	2.0%	1778
Barranquilla	15.5%	8.6%	53.8%	20.4%	1.8%	7999
Bello	12.7%	8.1%	58.2%	20.0%	1.0%	3080
Bogotá, D.C.	8.8%	6.9%	63.4%	18.3%	2.6%	52992
Bolívar	24.0%	11.9%	37.8%	22.4%	3.9%	7953
Boyacá	13.9%	9.8%	54.8%	20.2%	1.2%	7149
Bucaramanga	9.2%	6.4%	64.2%	19.3%	1.0%	3981
Buenaventura	17.7%	7.4%	48.1%	23.2%	3.5%	2559
Buga	13.2%	7.9%	54.4%	19.7%	4.9%	864
Caldas	13.7%	8.1%	56.3%	20.8%	1.2%	4335
Cali	12.2%	7.6%	58.4%	19.3%	2.5%	14284
Caquetá	18.4%	11.4%	46.2%	22.2%	1.8%	2306
Cartagena	16.9%	9.0%	50.4%	21.0%	2.7%	8176
Cartago	12.4%	9.3%	57.1%	19.7%	1.5%	798
Casanare	14.4%	9.3%	52.7%	21.9%	1.7%	2146
Cauca	16.5%	10.9%	46.4%	23.3%	2.9%	8893
Cesar	19.2%	9.8%	49.0%	19.9%	2.1%	6129
Chocó	19.6%	10.5%	34.8%	29.0%	6.2%	2815
Chía	7.6%	5.0%	67.6%	19.2%	0.6%	959
Ciénaga	19.7%	9.5%	44.0%	21.9%	4.8%	1135
Cundinamarca	10.6%	7.9%	60.1%	20.0%	1.4%	11860
Córdoba	20.4%	11.2%	42.0%	23.5%	2.9%	9412
Cúcuta	14.3%	7.7%	59.2%	17.7%	1.2%	5518
Dosquebradas	9.7%	7.9%	61.6%	20.2%	0.6%	1248
Duitama	7.0%	5.5%	72.4%	14.4%	0.7%	1037
Envigado	6.7%	6.2%	67.3%	19.0%	0.9%	1216
Facatativá	10.3%	7.6%	66.1%	15.7%	0.3%	1062
Florencia	17.0%	8.1%	51.7%	21.0%	2.1%	1475
Floridablanca	7.1%	7.9%	62.1%	21.3%	1.7%	1852
Fusagasugá	11.4%	7.7%	59.8%	20.4%	0.7%	1058
Girardot	15.7%	8.5%	52.9%	21.1%	1.8%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	11.9%	8.7%	59.1%	19.5%	0.9%	1011
Guainía	0.0%	0.0%	50.0%	50.0%	0.0%	2
Guaviare	16.1%	9.4%	45.8%	25.2%	3.5%	710
Huila	16.3%	10.0%	52.0%	20.7%	1.1%	6415
Ibagué	11.8%	8.3%	60.3%	18.4%	1.3%	3972
Ipiales	9.6%	7.2%	64.2%	18.0%	1.0%	1014
Itagüí	15.4%	9.2%	55.2%	18.4%	1.8%	1365
Jamundí	14.1%	9.3%	50.2%	24.1%	2.3%	871
La Guajira	19.1%	9.4%	46.6%	21.1%	3.7%	2481
Lorica	21.9%	9.9%	41.7%	22.8%	3.7%	1141
Magangué	22.0%	9.7%	44.7%	20.1%	3.5%	1220
Magdalena	22.5%	11.1%	37.7%	23.4%	5.2%	6289
Maicao	19.2%	11.2%	39.2%	24.8%	5.5%	1425
Malambo	18.3%	8.7%	52.0%	17.5%	3.5%	953
Manizales	10.6%	8.2%	62.2%	18.5%	0.5%	2324
Medellín	14.1%	9.4%	55.7%	19.3%	1.6%	16107
Meta	14.4%	9.8%	51.4%	22.1%	2.3%	3976
Montería	17.7%	9.8%	49.9%	20.6%	2.0%	3793
Mosquera	6.8%	7.4%	63.1%	21.9%	0.8%	880
Nariño	12.8%	8.5%	53.4%	22.2%	3.1%	7283
Neiva	14.6%	7.8%	56.6%	19.3%	1.6%	3000
Norte de Santander	15.3%	9.0%	54.4%	20.0%	1.2%	5754
Palmira	11.7%	6.8%	60.6%	19.3%	1.6%	2080
Pasto	10.6%	7.3%	65.3%	16.0%	0.9%	3134
Pereira	10.3%	6.9%	59.6%	21.6%	1.5%	3510
Piedecuesta	12.0%	9.4%	57.2%	20.1%	1.3%	1103
Pitalito	15.7%	10.2%	52.0%	20.2%	1.9%	1277
Popayán	10.0%	7.0%	62.5%	18.5%	2.0%	2100
Putumayo	14.6%	9.7%	49.1%	24.4%	2.2%	3241
Quibdó	22.0%	8.5%	40.8%	23.9%	4.8%	1068
Quindío	14.9%	10.6%	52.3%	21.0%	1.2%	2171
Riohacha	19.0%	12.3%	43.0%	22.5%	3.2%	1686
Rionegro	8.6%	7.0%	65.5%	18.1%	0.7%	838
Risaralda	15.4%	9.0%	51.5%	22.5%	1.6%	2244
Sabaneta	7.5%	6.4%	65.4%	20.1%	0.5%	373
Sahagún	18.0%	11.1%	46.0%	23.4%	1.5%	956
San Andrés	17.6%	11.7%	39.4%	26.0%	5.3%	454
Santa Marta	17.7%	9.8%	48.7%	21.1%	2.8%	4142
Santander	12.2%	8.8%	58.1%	19.6%	1.3%	6474

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	16.5%	9.2%	52.9%	19.4%	2.1%	2541
Soacha	10.8%	7.5%	63.4%	17.3%	0.9%	4162
Sogamoso	8.3%	7.3%	66.6%	16.9%	0.9%	1088
Soledad	16.1%	8.4%	54.9%	19.1%	1.4%	3910
Sucre	21.0%	11.7%	40.7%	23.5%	3.1%	5581
Tolima	16.3%	9.7%	51.1%	21.0%	1.9%	7481
Tuluá	12.6%	7.9%	56.2%	21.8%	1.6%	1601
Tumaco	20.7%	10.2%	36.8%	25.1%	7.2%	1891
Tunja	8.6%	7.0%	63.9%	19.8%	0.7%	1342
Turbo	23.1%	11.6%	34.7%	24.8%	5.8%	1486
Uribia	16.6%	11.9%	34.0%	35.0%	2.5%	403
Valle del Cauca	14.7%	9.5%	52.4%	21.5%	1.8%	6241
Valledupar	17.0%	7.7%	51.9%	20.6%	2.7%	3540
Vaupés	20.0%	0.0%	0.0%	60.0%	20.0%	5
Vichada	13.3%	10.0%	42.0%	28.9%	5.9%	460
Villavicencio	10.7%	7.5%	61.5%	18.9%	1.4%	4039
Yopal	8.0%	7.5%	62.0%	21.4%	1.1%	1312
Yumbo	13.6%	10.2%	52.3%	22.4%	1.5%	941
Zipaquirá	7.9%	6.2%	66.4%	17.9%	1.6%	1026
Colombia	14.2%	8.8%	54.2%	20.5%	2.2%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

Responde las preguntas 13 y 14 de acuerdo con el siguiente texto:

Los estudiantes de grado quinto votaron para escoger la actividad con la que participarán en la celebración del Día del Colegio.

Curso / Actividad	Quinto A	Quinto B
Danza	10	6
Teatro	7	10
Canto	9	9
Poesía	4	5

- **Pregunta 13.**

¿Qué actividad fue escogida por la mayoría de estudiantes de grado quinto?

A. Danza.
B. Teatro.
C. Canto.
D. Poesía.

- **Estructura**

Competencia	Comunicación, representación y modelación
Componente	Aleatorio
Afirmación	Describir e interpretar datos relativos a situaciones del entorno escolar.
Nivel de desempeño	Satisfactorio
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	27.3%	24.5%	36.4%	6.9%	5.0%	785
Antioquia	20.6%	22.2%	50.5%	5.0%	1.7%	21528
Apartadó	19.8%	25.4%	47.7%	5.3%	1.8%	1235
Arauca	19.1%	21.1%	55.5%	2.9%	1.5%	2030
Armenia	19.9%	23.2%	53.6%	2.7%	0.5%	2026
Atlántico	22.4%	22.4%	44.0%	7.2%	3.9%	4445
Barrancabermeja	20.8%	22.5%	51.3%	3.7%	1.7%	1778
Barranquilla	20.8%	23.0%	51.9%	3.0%	1.4%	7999
Bello	17.5%	21.8%	57.0%	2.8%	0.9%	3080
Bogotá, D.C.	14.9%	20.1%	61.0%	1.7%	2.3%	52992
Bolívar	26.2%	21.8%	37.3%	11.4%	3.3%	7953
Boyacá	19.1%	21.8%	55.2%	3.1%	0.9%	7149
Bucaramanga	14.3%	20.2%	63.1%	1.7%	0.7%	3981
Buenaventura	22.4%	19.6%	50.2%	4.8%	3.1%	2559
Buga	18.4%	23.4%	52.1%	2.3%	3.8%	864
Caldas	19.4%	22.4%	54.2%	2.9%	1.2%	4335
Cali	18.5%	24.0%	53.0%	2.5%	2.1%	14284
Caquetá	21.7%	20.4%	51.7%	4.9%	1.3%	2306
Cartagena	23.9%	21.6%	47.3%	4.9%	2.4%	8176
Cartago	20.6%	21.8%	52.0%	4.3%	1.4%	798
Casanare	20.5%	23.3%	51.5%	3.2%	1.5%	2146
Cauca	24.3%	21.1%	46.6%	5.4%	2.6%	8893
Cesar	21.9%	20.8%	49.6%	6.0%	1.6%	6129
Chocó	27.1%	19.4%	38.0%	10.2%	5.2%	2815
Chía	13.0%	20.1%	65.2%	1.1%	0.5%	959
Ciénaga	19.4%	20.8%	50.6%	5.1%	4.1%	1135
Cundinamarca	16.9%	20.9%	58.7%	2.4%	1.1%	11860
Córdoba	23.7%	22.5%	43.7%	8.0%	2.1%	9412
Cúcuta	17.7%	21.1%	57.6%	2.9%	0.7%	5518
Dosquebradas	16.6%	22.9%	57.9%	2.1%	0.5%	1248
Duitama	13.1%	18.9%	66.5%	1.0%	0.5%	1037
Envigado	12.5%	18.5%	67.6%	1.2%	0.2%	1216
Facatativá	13.7%	21.8%	62.3%	1.8%	0.4%	1062
Florencia	23.3%	23.3%	48.3%	3.5%	1.6%	1475
Floridablanca	14.5%	20.5%	62.7%	1.2%	1.1%	1852
Fusagasugá	17.8%	20.5%	59.4%	1.6%	0.8%	1058
Girardot	21.4%	24.3%	50.1%	3.0%	1.3%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	19.4%	21.8%	55.6%	2.6%	0.7%	1011
Guainía	50.0%	0.0%	50.0%	0.0%	0.0%	2
Guaviare	22.5%	21.0%	48.5%	4.8%	3.2%	710
Huila	18.7%	24.9%	52.5%	3.2%	0.8%	6415
Ibagué	18.6%	21.8%	56.3%	2.4%	0.9%	3972
Ipiales	13.8%	17.9%	65.3%	2.4%	0.6%	1014
Itagüí	18.2%	24.1%	53.4%	3.1%	1.2%	1365
Jamundí	19.7%	27.0%	47.9%	3.4%	2.0%	871
La Guajira	21.6%	23.1%	45.7%	7.1%	2.6%	2481
Lorica	25.5%	22.5%	41.5%	8.4%	2.1%	1141
Magangué	25.6%	24.4%	41.5%	5.8%	2.7%	1220
Magdalena	26.2%	20.9%	39.3%	9.4%	4.1%	6289
Maicao	25.1%	22.1%	40.4%	7.2%	5.3%	1425
Malambo	22.1%	20.7%	48.9%	5.0%	3.3%	953
Manizales	16.0%	21.2%	60.2%	2.1%	0.4%	2324
Medellín	19.6%	22.6%	52.9%	3.6%	1.3%	16107
Meta	21.2%	24.5%	48.9%	3.1%	2.2%	3976
Montería	21.0%	23.0%	48.3%	6.1%	1.5%	3793
Mosquera	14.5%	19.9%	63.3%	1.5%	0.8%	880
Nariño	17.3%	17.7%	58.1%	4.4%	2.6%	7283
Neiva	19.0%	23.9%	53.5%	2.8%	0.9%	3000
Norte de Santander	19.1%	20.2%	55.9%	3.9%	0.8%	5754
Palmira	19.6%	24.9%	52.2%	2.1%	1.2%	2080
Pasto	14.6%	20.7%	61.6%	2.6%	0.5%	3134
Pereira	17.7%	22.7%	55.6%	2.7%	1.2%	3510
Piedecuesta	18.0%	21.9%	57.0%	2.0%	1.0%	1103
Pitalito	18.2%	23.5%	54.3%	3.0%	1.1%	1277
Popayán	17.3%	20.4%	59.7%	1.5%	1.1%	2100
Putumayo	20.2%	22.2%	51.7%	4.3%	1.6%	3241
Quibdó	24.5%	20.0%	44.1%	8.7%	2.6%	1068
Quindío	20.8%	23.8%	50.9%	3.4%	1.2%	2171
Riohacha	22.3%	22.4%	46.1%	6.8%	2.4%	1686
Rionegro	15.3%	21.4%	60.9%	1.8%	0.7%	838
Risaralda	19.9%	23.9%	50.9%	3.9%	1.4%	2244
Sabaneta	14.2%	17.7%	66.5%	1.3%	0.3%	373
Sahagún	24.1%	24.3%	44.0%	6.7%	0.9%	956
San Andrés	31.1%	19.8%	39.0%	5.3%	4.8%	454
Santa Marta	22.2%	22.2%	48.9%	4.1%	2.7%	4142
Santander	16.6%	22.1%	57.7%	2.8%	0.8%	6474

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	22.7%	22.7%	49.2%	4.0%	1.5%	2541
Soacha	17.5%	21.5%	57.9%	2.3%	0.8%	4162
Sogamoso	13.9%	21.0%	63.2%	1.6%	0.3%	1088
Soledad	20.6%	22.7%	52.3%	3.5%	0.9%	3910
Sucre	23.3%	22.2%	43.1%	9.3%	2.1%	5581
Tolima	22.1%	23.1%	49.1%	4.3%	1.4%	7481
Tuluá	19.1%	22.2%	54.2%	2.9%	1.6%	1601
Tumaco	27.8%	20.4%	37.9%	7.2%	6.8%	1891
Tunja	13.9%	21.9%	61.8%	1.9%	0.4%	1342
Turbo	23.1%	22.9%	39.2%	9.6%	5.2%	1486
Uribia	24.3%	22.6%	39.7%	10.7%	2.7%	403
Valle del Cauca	20.9%	23.6%	50.8%	3.1%	1.6%	6241
Valledupar	21.2%	21.6%	50.2%	4.5%	2.4%	3540
Vaupés	0.0%	40.0%	20.0%	20.0%	20.0%	5
Vichada	17.0%	22.8%	48.3%	7.0%	5.0%	460
Villavicencio	17.2%	22.8%	56.8%	2.4%	0.8%	4039
Yopal	17.8%	21.9%	56.5%	2.7%	1.1%	1312
Yumbo	20.7%	22.1%	53.6%	2.8%	0.9%	941
Zipaquirá	14.5%	22.1%	60.9%	1.4%	1.1%	1026
Colombia	19.5%	21.8%	53.0%	4.0%	1.8%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 14.**

¿Cuál o cuáles de las siguientes afirmaciones, acerca de la votación de los estudiantes de grado quinto, es o son verdadera(s)?

I. La actividad favorita de Quinto A es el canto.
II. La actividad favorita de Quinto B es el teatro.
III. El número de niños que prefieren la poesía en Quinto A y en Quinto B es el mismo.

A. I solamente.
B. II solamente.
C. I y III solamente.
D. II y III solamente.

- **Estructura**

Competencia	Razonamiento y argumentación
Componente	Aleatorio
Afirmación	Hacer inferencias a partir de representaciones de uno o más conjuntos de datos.
Nivel de desempeño	Satisfactorio
Respuesta correcta	B

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	22.0%	34.4%	16.4%	20.8%	6.4%	785
Antioquia	20.5%	42.3%	16.3%	18.8%	2.0%	21528
Apartadó	17.8%	40.2%	21.5%	18.1%	2.3%	1235
Arauca	22.3%	45.1%	15.2%	15.8%	1.7%	2030
Armenia	19.2%	50.9%	13.6%	15.7%	0.6%	2026
Atlántico	20.2%	38.6%	18.7%	18.3%	4.2%	4445
Barrancabermeja	19.6%	44.6%	17.8%	15.8%	2.2%	1778
Barranquilla	20.1%	47.2%	15.3%	15.6%	1.8%	7999
Bello	19.7%	49.0%	13.5%	16.4%	1.3%	3080
Bogotá, D.C.	18.7%	54.7%	12.0%	12.1%	2.5%	52992
Bolívar	20.5%	33.5%	20.7%	21.5%	3.8%	7953
Boyacá	19.4%	45.9%	16.2%	17.4%	1.0%	7149
Bucaramanga	17.6%	58.1%	11.5%	12.0%	0.9%	3981
Buenaventura	21.3%	41.0%	16.1%	18.3%	3.4%	2559
Buga	19.8%	49.5%	13.0%	13.4%	4.3%	864
Caldas	21.6%	45.5%	14.9%	16.5%	1.5%	4335
Cali	20.1%	50.7%	13.8%	12.9%	2.5%	14284
Caquetá	22.3%	39.1%	17.2%	19.5%	1.9%	2306
Cartagena	19.2%	43.7%	16.5%	17.9%	2.8%	8176
Cartago	18.4%	51.1%	14.8%	13.4%	2.3%	798
Casanare	23.3%	40.8%	17.1%	17.0%	1.8%	2146
Cauca	21.8%	38.3%	17.7%	18.9%	3.3%	8893
Cesar	21.5%	40.3%	17.3%	18.8%	2.1%	6129
Chocó	20.6%	32.2%	18.5%	22.9%	5.9%	2815
Chía	17.4%	58.9%	9.5%	13.3%	0.8%	959
Ciénaga	21.9%	37.9%	16.1%	19.4%	4.8%	1135
Cundinamarca	19.9%	49.5%	14.4%	14.7%	1.5%	11860
Córdoba	21.2%	36.4%	19.6%	20.2%	2.6%	9412
Cúcuta	19.1%	51.2%	14.3%	14.5%	1.0%	5518
Dosquebradas	18.5%	48.7%	14.5%	17.5%	0.8%	1248
Duitama	15.7%	64.2%	9.9%	9.3%	0.9%	1037
Envigado	15.7%	63.5%	9.7%	10.6%	0.5%	1216
Facatativá	21.3%	55.9%	11.6%	10.6%	0.6%	1062
Florencia	20.7%	44.2%	15.7%	17.2%	2.1%	1475
Floridablanca	18.2%	58.3%	11.7%	10.6%	1.2%	1852
Fusagasugá	22.6%	49.1%	13.2%	14.4%	0.7%	1058
Girardot	22.8%	45.0%	14.3%	15.6%	2.3%	777

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	18.4%	49.4%	16.9%	14.4%	0.9%	1011
Guainía	0.0%	0.0%	0.0%	100.0%	0.0%	2
Guaviare	23.2%	34.1%	16.6%	22.0%	4.1%	710
Huila	21.0%	43.0%	15.7%	19.2%	1.2%	6415
Ibagué	18.8%	52.9%	13.8%	13.2%	1.3%	3972
Ipiales	20.0%	50.3%	14.2%	14.9%	0.6%	1014
Itagüí	18.9%	49.2%	15.8%	14.9%	1.2%	1365
Jamundí	20.1%	43.4%	15.8%	18.1%	2.5%	871
La Guajira	21.1%	37.4%	18.8%	19.3%	3.4%	2481
Lorica	20.4%	35.1%	19.5%	22.0%	3.0%	1141
Magangué	23.0%	37.3%	16.0%	20.7%	3.0%	1220
Magdalena	22.0%	33.1%	18.9%	21.5%	4.5%	6289
Maicao	20.0%	35.9%	18.7%	19.8%	5.5%	1425
Malambo	17.9%	43.9%	17.6%	17.6%	2.9%	953
Manizales	20.5%	54.6%	11.7%	12.6%	0.6%	2324
Medellín	18.9%	47.2%	16.1%	16.3%	1.5%	16107
Meta	22.1%	40.1%	16.9%	18.3%	2.6%	3976
Montería	19.7%	43.3%	16.7%	18.6%	1.7%	3793
Mosquera	22.5%	50.9%	11.5%	14.2%	0.9%	880
Nariño	24.4%	41.2%	14.9%	16.4%	3.2%	7283
Neiva	20.6%	50.7%	14.3%	13.0%	1.4%	3000
Norte de Santander	21.8%	45.7%	15.6%	15.8%	1.0%	5754
Palmira	20.8%	51.5%	14.1%	12.2%	1.4%	2080
Pasto	20.3%	52.8%	14.2%	12.1%	0.6%	3134
Pereira	19.5%	50.8%	13.6%	14.5%	1.7%	3510
Piedecuesta	20.8%	51.0%	15.0%	11.8%	1.5%	1103
Pitalito	22.2%	43.0%	14.1%	18.9%	1.8%	1277
Popayán	19.8%	52.5%	12.0%	13.9%	1.9%	2100
Putumayo	21.0%	42.1%	16.2%	18.5%	2.2%	3241
Quibdó	20.3%	34.3%	19.0%	22.4%	4.0%	1068
Quindío	21.5%	44.4%	15.5%	17.3%	1.4%	2171
Riohacha	22.9%	39.0%	15.4%	19.8%	3.0%	1686
Rionegro	19.0%	52.7%	12.8%	15.0%	0.5%	838
Risaralda	21.7%	40.6%	18.3%	18.0%	1.5%	2244
Sabaneta	17.2%	60.6%	11.0%	10.5%	0.8%	373
Sahagún	18.7%	42.3%	19.2%	18.8%	0.9%	956
San Andrés	17.4%	40.3%	18.9%	18.3%	5.1%	454
Santa Marta	22.7%	41.8%	15.0%	17.3%	3.3%	4142
Santander	19.2%	49.8%	13.7%	16.0%	1.2%	6474

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	19.9%	43.5%	17.6%	17.4%	1.6%	2541
Soacha	20.8%	49.8%	14.6%	13.8%	1.1%	4162
Sogamoso	16.9%	57.8%	13.1%	11.7%	0.5%	1088
Soledad	20.3%	48.1%	15.2%	15.0%	1.4%	3910
Sucre	20.9%	35.3%	19.9%	21.2%	2.7%	5581
Tolima	21.8%	40.4%	17.0%	18.8%	1.9%	7481
Tuluá	21.1%	48.7%	15.4%	13.3%	1.5%	1601
Tumaco	20.0%	30.5%	19.7%	22.9%	6.9%	1891
Tunja	18.7%	58.5%	11.1%	11.2%	0.5%	1342
Turbo	20.9%	30.4%	20.3%	22.5%	5.9%	1486
Uribia	26.3%	33.5%	22.6%	14.9%	2.7%	403
Valle del Cauca	22.8%	43.7%	16.1%	15.7%	1.7%	6241
Valledupar	22.4%	41.6%	15.5%	17.7%	2.7%	3540
Vaupés	20.0%	0.0%	20.0%	40.0%	20.0%	5
Vichada	22.8%	36.5%	18.5%	17.2%	5.0%	460
Villavicencio	20.7%	49.2%	14.4%	14.3%	1.4%	4039
Yopal	21.9%	47.7%	12.0%	16.7%	1.7%	1312
Yumbo	18.7%	50.5%	15.1%	14.5%	1.3%	941
Zipaquirá	19.7%	53.6%	11.9%	13.6%	1.2%	1026
Colombia	20.3%	46.0%	15.3%	16.2%	2.2%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 15.**

Pepe tiene el doble de canicas que Luis y entre los dos reúnen 30 canicas. ¿Cuántas canicas tiene Pepe y cuántas canicas tiene Luis?

A. Pepe tiene 6 canicas y Luis tiene 5 canicas.
B. Pepe tiene 15 canicas y Luis tiene 15 canicas.
C. Pepe tiene 20 canicas y Luis tiene 10 canicas.
D. Pepe tiene 60 canicas y Luis tiene 30 canicas.

- **Estructura**

Competencia	Planteamiento y resolución de problemas
Componente	Numérico - variacional
Afirmación	Resolver problemas aditivos rutinarios y no rutinarios de transformación, comparación, combinación e igualación e interpretar condiciones necesarias para su solución.
Nivel de desempeño	Satisfactorio
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	5.6%	31.0%	29.4%	28.4%	5.6%	785
Antioquia	5.3%	31.8%	43.8%	17.0%	2.1%	21528
Apartadó	7.1%	31.0%	40.3%	18.9%	2.6%	1235
Arauca	5.4%	29.3%	46.8%	16.6%	1.9%	2030
Armenia	5.6%	30.5%	47.6%	15.1%	1.2%	2026
Atlántico	7.4%	31.1%	36.6%	20.2%	4.7%	4445
Barrancabermeja	5.6%	32.9%	43.8%	15.4%	2.4%	1778
Barranquilla	5.3%	32.9%	42.8%	17.2%	1.8%	7999
Bello	4.4%	32.9%	48.8%	12.6%	1.2%	3080
Bogotá, D.C.	3.6%	29.9%	53.3%	10.7%	2.5%	52992
Bolívar	8.6%	29.9%	32.9%	24.4%	4.2%	7953
Boyacá	4.8%	28.8%	50.3%	14.9%	1.2%	7149
Bucaramanga	3.9%	27.6%	56.4%	11.4%	0.7%	3981
Buenaventura	5.5%	29.2%	40.4%	21.4%	3.6%	2559
Buga	3.1%	33.1%	44.8%	14.1%	4.9%	864
Caldas	4.3%	32.5%	46.1%	16.0%	1.2%	4335
Cali	4.8%	31.3%	46.7%	14.7%	2.5%	14284
Caquetá	6.0%	30.2%	41.5%	20.3%	2.0%	2306
Cartagena	7.2%	30.8%	41.2%	18.0%	2.8%	8176
Cartago	4.3%	33.5%	43.4%	16.4%	2.5%	798
Casanare	4.8%	31.1%	44.9%	17.0%	2.1%	2146
Cauca	5.0%	31.5%	39.1%	21.2%	3.1%	8893
Cesar	5.7%	32.0%	39.4%	20.5%	2.5%	6129
Chocó	7.4%	26.3%	32.0%	27.5%	6.9%	2815
Chía	3.5%	27.9%	58.9%	8.9%	0.7%	959
Ciénaga	4.3%	31.2%	37.9%	21.9%	4.7%	1135
Cundinamarca	4.1%	30.1%	51.4%	12.9%	1.5%	11860
Córdoba	6.8%	31.4%	36.5%	22.5%	2.9%	9412
Cúcuta	5.4%	30.6%	46.8%	16.1%	1.1%	5518
Dosquebradas	3.4%	33.8%	48.8%	13.1%	0.9%	1248
Duitama	3.5%	23.5%	64.6%	7.8%	0.6%	1037
Envigado	2.7%	25.4%	63.7%	7.7%	0.5%	1216
Facatativá	4.1%	30.9%	53.7%	10.7%	0.6%	1062
Florencia	6.8%	33.2%	39.5%	18.6%	1.9%	1475
Floridablanca	3.7%	29.8%	55.1%	10.1%	1.2%	1852
Fusagasugá	3.5%	33.3%	49.9%	12.7%	0.7%	1058
Girardot	5.9%	30.9%	44.0%	16.7%	2.4%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	4.9%	31.0%	48.7%	14.9%	0.5%	1011
Guainía	0.0%	50.0%	0.0%	50.0%	0.0%	2
Guaviare	4.4%	30.3%	40.1%	20.7%	4.5%	710
Huila	4.8%	31.7%	45.1%	17.4%	1.1%	6415
Ibagué	4.2%	30.7%	51.5%	12.3%	1.3%	3972
Ipiales	5.1%	30.6%	51.0%	12.6%	0.7%	1014
Itagüí	6.4%	31.6%	47.0%	13.4%	1.5%	1365
Jamundí	5.4%	32.6%	40.5%	18.7%	2.8%	871
La Guajira	7.1%	29.3%	36.8%	23.0%	3.8%	2481
Lorica	8.3%	29.8%	33.5%	25.4%	3.0%	1141
Magangué	7.9%	29.8%	36.7%	22.3%	3.3%	1220
Magdalena	6.9%	29.4%	34.0%	24.8%	4.8%	6289
Maicao	7.4%	28.5%	34.8%	23.5%	5.8%	1425
Malambo	6.4%	34.2%	40.0%	16.7%	2.7%	953
Manizales	3.4%	33.6%	49.6%	12.6%	0.8%	2324
Medellín	6.5%	31.3%	46.7%	14.0%	1.6%	16107
Meta	5.8%	29.8%	44.8%	16.9%	2.8%	3976
Montería	6.5%	33.1%	39.1%	19.6%	1.7%	3793
Mosquera	3.3%	29.4%	56.1%	10.1%	1.0%	880
Nariño	3.8%	29.7%	46.1%	17.1%	3.2%	7283
Neiva	4.8%	33.3%	45.1%	15.3%	1.5%	3000
Norte de Santander	4.5%	30.9%	46.3%	17.0%	1.3%	5754
Palmira	4.1%	33.0%	46.3%	15.0%	1.6%	2080
Pasto	4.3%	30.6%	50.5%	13.8%	0.7%	3134
Pereira	3.4%	33.8%	47.4%	13.7%	1.7%	3510
Piedecuesta	5.3%	30.5%	48.1%	14.8%	1.4%	1103
Pitalito	4.7%	30.3%	45.5%	18.2%	1.3%	1277
Popayán	3.0%	34.6%	46.5%	14.0%	1.9%	2100
Putumayo	5.3%	30.7%	42.7%	19.2%	2.1%	3241
Quibdó	8.3%	33.6%	30.6%	23.7%	3.7%	1068
Quindío	4.9%	35.7%	42.2%	15.5%	1.7%	2171
Riohacha	6.2%	30.0%	38.9%	21.5%	3.4%	1686
Rionegro	4.3%	32.6%	53.9%	8.2%	1.0%	838
Risaralda	4.8%	34.5%	41.7%	17.5%	1.6%	2244
Sabaneta	3.8%	30.6%	58.2%	7.0%	0.5%	373
Sahagún	5.9%	30.0%	41.3%	21.4%	1.4%	956
San Andrés	8.6%	28.9%	38.8%	17.8%	5.9%	454
Santa Marta	6.1%	32.6%	39.9%	18.2%	3.2%	4142
Santander	4.5%	28.4%	50.7%	15.0%	1.4%	6474

Continúa en la siguiente página

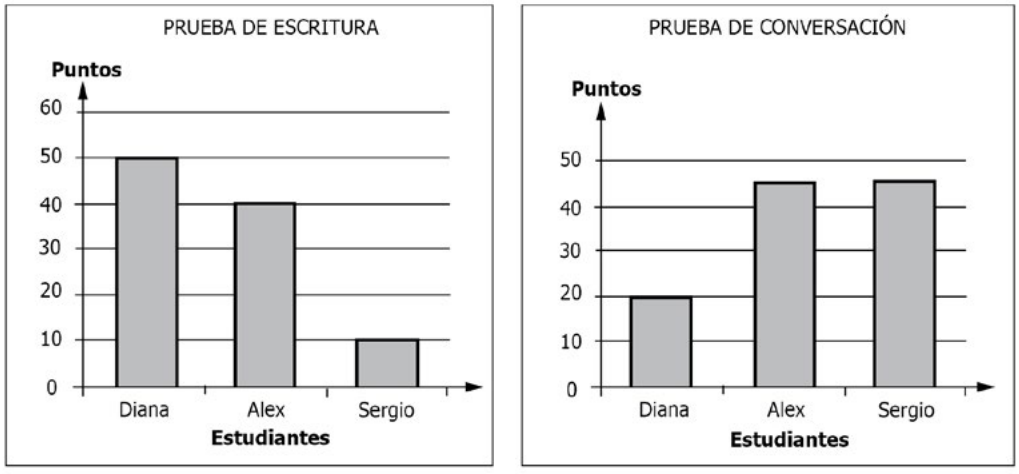
ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	6.1%	34.0%	39.0%	18.6%	2.3%	2541
Soacha	3.7%	30.7%	50.7%	13.9%	1.0%	4162
Sogamoso	2.9%	25.9%	60.6%	10.1%	0.5%	1088
Soledad	6.1%	33.1%	42.2%	17.4%	1.2%	3910
Sucre	7.5%	31.0%	34.9%	23.7%	3.0%	5581
Tolima	5.2%	32.7%	42.3%	17.9%	1.9%	7481
Tuluá	4.1%	33.5%	46.0%	14.8%	1.6%	1601
Tumaco	7.2%	27.0%	33.7%	23.8%	8.2%	1891
Tunja	4.1%	28.5%	57.7%	9.2%	0.4%	1342
Turbo	8.7%	32.2%	31.0%	22.6%	5.5%	1486
Uribia	6.5%	30.0%	29.0%	30.5%	4.0%	403
Valle del Cauca	5.2%	33.3%	42.5%	17.2%	1.8%	6241
Valledupar	5.5%	32.2%	40.6%	18.7%	3.1%	3540
Vaupés	0.0%	20.0%	40.0%	20.0%	20.0%	5
Vichada	6.1%	29.6%	35.4%	23.5%	5.4%	460
Villavicencio	4.8%	29.7%	49.9%	14.3%	1.4%	4039
Yopal	4.0%	30.1%	50.3%	14.2%	1.4%	1312
Yumbo	5.0%	32.6%	42.0%	19.1%	1.3%	941
Zipaquirá	2.4%	30.4%	56.7%	9.1%	1.4%	1026
Colombia	5.1%	30.9%	45.4%	16.2%	2.3%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 16.**

Una evaluación de inglés en un colegio tiene dos pruebas, una de escritura y otra de conversación. La evaluación se aprueba si la suma de los puntos obtenidos en las dos pruebas es mayor que 60.

Las siguientes gráficas muestran los resultados de Diana, Alex y Sergio en las pruebas.



En la prueba de conversación

A. Diana obtuvo más puntos que Sergio.
B. Sergio obtuvo más puntos que Alex.
C. Diana obtuvo más puntos que Alex.
D. Sergio obtuvo más puntos que Diana.

• Estructura

Competencia	Comunicación, representación y modelación
Componente	Aleatorio
Afirmación	Describir e interpretar datos relativas a situaciones del entorno escolar.
Nivel de desempeño	Satisfactorio
Respuesta correcta	D

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	27.5%	18.9%	20.4%	26.9%	6.4%	785
Antioquia	22.6%	16.0%	14.3%	44.4%	2.6%	21528
Apartadó	22.8%	18.9%	15.1%	40.2%	3.0%	1235
Arauca	22.3%	15.2%	13.5%	46.7%	2.2%	2030
Armenia	20.3%	14.6%	12.0%	51.9%	1.1%	2026
Atlántico	23.9%	16.4%	16.5%	38.5%	4.8%	4445
Barrancabermeja	22.0%	17.5%	11.6%	46.3%	2.6%	1778
Barranquilla	19.9%	17.1%	13.6%	47.0%	2.4%	7999
Bello	18.8%	17.0%	10.4%	52.3%	1.6%	3080
Bogotá, D.C.	15.5%	15.2%	9.5%	56.8%	3.0%	52992
Bolívar	26.9%	15.6%	18.5%	34.7%	4.4%	7953
Boyacá	20.8%	15.2%	12.6%	49.8%	1.6%	7149
Bucaramanga	15.0%	15.0%	8.9%	59.7%	1.4%	3981
Buenaventura	22.9%	15.7%	15.2%	42.3%	3.9%	2559
Buga	20.0%	14.8%	10.4%	50.0%	4.7%	864
Caldas	21.2%	15.6%	14.0%	47.5%	1.7%	4335
Cali	18.5%	15.2%	11.5%	52.0%	2.8%	14284
Caquetá	25.0%	16.5%	16.6%	39.2%	2.7%	2306
Cartagena	21.4%	16.1%	14.4%	44.6%	3.5%	8176
Cartago	19.4%	14.3%	16.2%	48.0%	2.1%	798
Casanare	21.6%	17.6%	15.2%	43.1%	2.6%	2146
Cauca	24.8%	14.9%	16.6%	40.0%	3.7%	8893
Cesar	24.1%	15.0%	17.5%	40.9%	2.6%	6129
Chocó	26.9%	13.6%	17.7%	35.2%	6.6%	2815
Chía	14.5%	15.1%	9.6%	60.0%	0.8%	959

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	26.2%	14.4%	16.1%	37.8%	5.6%	1135
Cundinamarca	19.0%	14.2%	11.6%	53.1%	2.1%	11860
Córdoba	25.7%	16.2%	18.7%	36.6%	2.8%	9412
Cúcuta	19.0%	16.9%	11.4%	51.2%	1.5%	5518
Dosquebradas	19.2%	16.4%	10.9%	52.2%	1.3%	1248
Duitama	12.1%	13.2%	6.8%	66.9%	1.1%	1037
Envigado	15.2%	14.1%	7.2%	62.7%	0.7%	1216
Facatativá	18.0%	12.7%	10.0%	58.2%	1.1%	1062
Florencia	22.9%	16.3%	14.9%	43.3%	2.6%	1475
Floridablanca	14.1%	14.3%	7.9%	61.7%	2.0%	1852
Fusagasugá	16.1%	16.0%	12.9%	54.2%	0.9%	1058
Girardot	20.5%	17.5%	12.6%	46.6%	2.8%	777
Girón	18.5%	16.0%	11.8%	52.6%	1.1%	1011
Guainía	100.0%	0.0%	0.0%	0.0%	0.0%	2
Guaviare	26.3%	16.2%	13.5%	39.7%	4.2%	710
Huila	23.0%	16.1%	15.3%	44.2%	1.3%	6415
Ibagué	17.5%	14.0%	10.5%	56.2%	1.8%	3972
Ipiales	19.1%	11.5%	12.8%	55.2%	1.3%	1014
Itagüí	16.8%	19.2%	11.0%	50.8%	2.1%	1365
Jamundí	23.1%	14.6%	14.4%	44.7%	3.3%	871
La Guajira	25.8%	15.4%	15.9%	38.9%	4.0%	2481
Lorica	28.3%	14.5%	17.3%	36.6%	3.2%	1141
Magangué	26.9%	17.5%	16.6%	35.8%	3.2%	1220
Magdalena	27.9%	16.0%	18.2%	32.7%	5.2%	6289
Maicao	25.5%	14.3%	18.2%	36.0%	6.0%	1425
Malambo	23.5%	18.0%	14.1%	40.6%	3.8%	953
Manizales	17.8%	13.7%	10.7%	56.5%	1.2%	2324
Medellín	19.9%	17.0%	12.2%	49.0%	1.9%	16107
Meta	22.5%	18.1%	14.3%	41.8%	3.4%	3976
Montería	24.5%	16.3%	15.4%	41.7%	2.1%	3793
Mosquera	14.0%	18.8%	10.6%	55.5%	1.3%	880
Nariño	21.1%	13.7%	13.8%	47.7%	3.7%	7283
Neiva	18.4%	15.6%	12.3%	51.7%	1.9%	3000
Norte de Santander	20.3%	16.2%	12.8%	49.1%	1.6%	5754
Palmira	17.5%	14.2%	10.2%	56.4%	1.7%	2080
Pasto	16.3%	13.7%	11.6%	57.1%	1.3%	3134
Pereira	19.9%	14.3%	11.3%	52.2%	2.3%	3510
Piedecuesta	18.0%	15.4%	11.2%	54.0%	1.4%	1103
Pitalito	19.9%	16.5%	15.0%	46.9%	1.7%	1277

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	19.9%	13.8%	11.2%	53.1%	2.0%	2100
Putumayo	22.8%	16.1%	15.7%	42.6%	2.7%	3241
Quibdó	25.5%	15.1%	17.2%	37.5%	4.7%	1068
Quindío	22.2%	15.2%	15.4%	45.5%	1.7%	2171
Riohacha	23.5%	15.7%	17.6%	38.9%	4.3%	1686
Rionegro	13.2%	11.9%	11.0%	62.4%	1.4%	838
Risaralda	22.1%	17.4%	15.7%	42.5%	2.3%	2244
Sabaneta	16.6%	16.1%	7.8%	58.4%	1.1%	373
Sahagún	24.2%	16.9%	16.8%	40.0%	2.1%	956
San Andrés	24.2%	14.5%	16.7%	38.1%	6.4%	454
Santa Marta	23.0%	16.2%	14.7%	42.8%	3.3%	4142
Santander	19.0%	14.1%	12.0%	53.1%	1.8%	6474
Sincelejo	20.0%	16.2%	14.8%	46.2%	2.9%	2541
Soacha	17.9%	17.0%	11.2%	52.4%	1.4%	4162
Sogamoso	11.0%	14.2%	9.7%	64.0%	1.1%	1088
Soledad	20.7%	16.2%	14.3%	47.1%	1.7%	3910
Sucre	26.0%	16.0%	18.3%	36.6%	3.1%	5581
Tolima	23.5%	15.4%	15.7%	43.2%	2.3%	7481
Tuluá	18.6%	13.7%	12.9%	52.5%	2.3%	1601
Tumaco	26.6%	15.4%	16.8%	33.2%	8.0%	1891
Tunja	14.8%	14.2%	9.7%	60.1%	1.2%	1342
Turbo	29.9%	15.3%	18.8%	30.0%	6.0%	1486
Uribia	26.1%	18.4%	19.6%	32.0%	4.0%	403
Valle del Cauca	22.5%	14.9%	14.8%	45.6%	2.2%	6241
Valledupar	22.6%	14.7%	14.5%	45.0%	3.2%	3540
Vaupés	20.0%	0.0%	60.0%	0.0%	20.0%	5
Vichada	24.8%	15.9%	15.9%	37.0%	6.5%	460
Villavicencio	18.2%	17.8%	11.0%	51.1%	1.9%	4039
Yopal	19.2%	17.4%	12.5%	49.4%	1.5%	1312
Yumbo	19.8%	15.8%	13.9%	48.9%	1.6%	941
Zipaquirá	15.1%	14.4%	10.9%	58.3%	1.3%	1026
Colombia	20.6%	15.6%	13.3%	47.8%	2.7%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

Responde las preguntas 17 y 18 de acuerdo con el siguiente texto:

Un edificio tiene cuatro pisos. La altura del primer piso es 4 metros; los otros tres pisos tienen cada uno 3 metros de altura.

- **Pregunta 17.**

¿Cuál es la altura total de los cuatro pisos del edificio?

A. 11 metros.
B. 12 metros.
C. 13 metros.
D. 14 metros.

- **Estructura**

Competencia	Planteamiento y resolución de problemas
Componente	Numérico - variacional
Afirmación	Resolver problemas aditivos rutinarios y no rutinarios de transformación, comparación, combinación e igualación e interpretar condiciones necesarias para su solución.
Nivel de desempeño	Satisfactorio
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	13.8%	21.0%	36.8%	22.7%	5.7%	785
Antioquia	11.6%	19.1%	50.1%	17.0%	2.2%	21528
Apartadó	14.6%	17.9%	48.2%	17.2%	2.2%	1235
Arauca	12.1%	20.0%	52.0%	14.1%	1.9%	2030
Armenia	12.6%	22.0%	51.3%	13.3%	0.7%	2026
Atlántico	12.5%	23.6%	40.6%	18.7%	4.5%	4445
Barrancabermeja	12.5%	21.3%	48.8%	15.5%	1.9%	1778
Barranquilla	12.9%	23.9%	46.4%	15.1%	1.8%	7999
Bello	13.1%	16.5%	57.0%	12.4%	1.0%	3080
Bogotá, D.C.	9.7%	18.9%	56.7%	12.1%	2.6%	52992
Bolívar	14.8%	24.2%	35.2%	21.7%	4.2%	7953
Boyacá	11.5%	21.3%	51.8%	14.2%	1.2%	7149
Bucaramanga	9.1%	18.9%	59.4%	11.5%	1.2%	3981
Buenaventura	12.6%	21.2%	43.7%	19.0%	3.4%	2559
Buga	9.8%	23.0%	49.7%	13.2%	4.3%	864
Caldas	12.1%	20.3%	50.6%	15.7%	1.4%	4335
Cali	11.7%	20.7%	51.3%	13.9%	2.4%	14284
Caquetá	10.6%	19.7%	50.5%	17.3%	1.9%	2306
Cartagena	14.5%	22.1%	43.3%	16.8%	3.2%	8176
Cartago	15.4%	20.3%	48.5%	13.7%	2.1%	798
Casanare	11.8%	22.6%	48.0%	15.8%	1.8%	2146
Cauca	10.9%	21.0%	46.0%	18.9%	3.2%	8893
Cesar	13.5%	20.9%	45.5%	18.2%	2.0%	6129
Chocó	12.7%	21.5%	35.7%	24.2%	6.0%	2815
Chía	9.6%	19.2%	59.3%	11.4%	0.5%	959
Ciénaga	11.5%	23.3%	44.7%	15.8%	4.8%	1135
Cundinamarca	9.6%	20.8%	55.1%	13.0%	1.5%	11860
Córdoba	13.4%	23.2%	40.5%	20.3%	2.6%	9412
Cúcuta	11.1%	21.5%	51.7%	14.5%	1.3%	5518
Dosquebradas	13.3%	20.1%	52.2%	13.4%	1.0%	1248
Duitama	7.2%	17.5%	67.3%	7.5%	0.5%	1037
Envigado	9.5%	14.5%	65.8%	10.0%	0.2%	1216
Facatativá	10.8%	20.7%	55.9%	12.1%	0.4%	1062
Florencia	13.4%	23.3%	46.5%	15.0%	1.9%	1475
Floridablanca	9.8%	18.7%	60.4%	9.7%	1.3%	1852
Fusagasugá	13.5%	19.8%	54.3%	11.1%	1.4%	1058
Girardot	14.7%	23.4%	45.0%	15.1%	1.8%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	10.5%	23.0%	51.2%	14.6%	0.6%	1011
Guainía	0.0%	0.0%	0.0%	100.0%	0.0%	2
Guaviare	11.0%	20.6%	45.8%	17.5%	5.2%	710
Huila	11.6%	21.2%	49.2%	16.8%	1.1%	6415
Ibagué	10.9%	21.3%	54.0%	12.7%	1.2%	3972
Ipiales	9.5%	21.5%	56.3%	11.8%	0.9%	1014
Itagüí	13.8%	18.1%	53.0%	13.6%	1.5%	1365
Jamundí	12.9%	24.0%	44.3%	16.9%	2.0%	871
La Guajira	15.1%	24.0%	36.2%	21.0%	3.8%	2481
Lorica	16.0%	19.8%	41.3%	20.2%	2.6%	1141
Magangué	17.0%	22.9%	36.6%	20.5%	3.0%	1220
Magdalena	14.1%	22.6%	37.6%	21.3%	4.5%	6289
Maicao	14.4%	21.8%	39.5%	18.7%	5.6%	1425
Malambo	12.3%	25.5%	42.7%	17.0%	2.5%	953
Manizales	11.4%	19.7%	55.2%	12.9%	0.9%	2324
Medellín	13.3%	20.1%	50.0%	15.0%	1.6%	16107
Meta	12.9%	21.5%	46.9%	15.9%	2.9%	3976
Montería	14.2%	23.9%	42.2%	17.9%	1.8%	3793
Mosquera	8.5%	19.1%	59.4%	11.6%	1.4%	880
Nariño	9.0%	20.2%	52.8%	14.9%	3.1%	7283
Neiva	12.6%	22.5%	47.5%	15.9%	1.5%	3000
Norte de Santander	10.8%	21.2%	53.0%	14.1%	1.0%	5754
Palmira	11.3%	21.4%	51.5%	14.2%	1.6%	2080
Pasto	10.1%	21.3%	54.7%	13.1%	0.9%	3134
Pereira	10.2%	18.9%	55.7%	13.7%	1.6%	3510
Piedecuesta	12.2%	21.4%	52.7%	12.5%	1.2%	1103
Pitalito	11.0%	23.2%	50.5%	13.6%	1.6%	1277
Popayán	9.8%	22.2%	54.4%	11.8%	1.8%	2100
Putumayo	10.7%	22.9%	47.8%	16.6%	2.0%	3241
Quibdó	13.7%	25.7%	35.6%	19.9%	5.1%	1068
Quindío	11.4%	20.7%	50.9%	15.5%	1.4%	2171
Riohacha	14.4%	24.0%	40.0%	18.5%	3.0%	1686
Rionegro	11.1%	17.7%	59.5%	11.3%	0.4%	838
Risaralda	12.1%	20.1%	49.3%	16.5%	2.0%	2244
Sabaneta	9.9%	16.4%	63.0%	10.2%	0.5%	373
Sahagún	14.9%	20.9%	43.9%	18.8%	1.5%	956
San Andrés	18.7%	24.4%	34.1%	17.2%	5.5%	454
Santa Marta	13.0%	23.5%	44.2%	16.1%	3.3%	4142
Santander	9.6%	21.6%	54.3%	13.3%	1.2%	6474

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	13.7%	21.5%	45.0%	17.6%	2.2%	2541
Soacha	11.6%	22.2%	52.2%	13.0%	1.0%	4162
Sogamoso	9.0%	18.1%	63.1%	9.6%	0.3%	1088
Soledad	12.2%	23.0%	48.7%	15.0%	1.2%	3910
Sucre	13.1%	23.6%	39.3%	21.2%	2.8%	5581
Tolima	12.3%	22.2%	47.5%	16.1%	1.9%	7481
Tuluá	11.1%	20.2%	53.3%	13.9%	1.6%	1601
Tumaco	13.2%	20.8%	35.7%	22.0%	8.2%	1891
Tunja	9.1%	22.2%	57.7%	10.5%	0.5%	1342
Turbo	16.0%	20.4%	35.3%	22.8%	5.5%	1486
Uribia	13.9%	27.8%	31.3%	23.3%	3.7%	403
Valle del Cauca	12.9%	21.6%	48.6%	15.2%	1.7%	6241
Valledupar	12.6%	21.4%	45.1%	18.0%	3.0%	3540
Vaupés	0.0%	40.0%	20.0%	20.0%	20.0%	5
Vichada	11.3%	23.3%	40.2%	20.2%	5.0%	460
Villavicencio	10.4%	19.7%	55.3%	13.4%	1.1%	4039
Yopal	10.7%	19.5%	55.0%	13.3%	1.4%	1312
Yumbo	12.6%	22.3%	48.9%	15.0%	1.2%	941
Zipaquirá	10.2%	20.1%	57.3%	11.1%	1.3%	1026
Colombia	11.7%	20.9%	49.7%	15.4%	2.3%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 18.**

¿Cuál o cuáles de las siguientes afirmaciones, acerca de los pisos que tiene el edificio, es o son verdaderas?

I. Todos los pisos tienen igual altura.
II. La altura del segundo piso es de 3 metros.
III. El primer piso es 1 metro más alto que el tercer piso.

A. I solamente.
B. I y II solamente.
C. II solamente.
D. II y III solamente.

- **Estructura**

Competencia	Comunicación, representación y modelación
Componente	Numérico - variacional
Afirmación	Describir e interpretar propiedades y relaciones de los números y sus operaciones.
Nivel de desempeño	Avanzado
Respuesta correcta	D

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	19.0%	19.5%	26.9%	28.9%	5.7%	785
Antioquia	16.9%	18.6%	24.8%	37.1%	2.6%	21528
Apartadó	16.8%	20.6%	23.6%	36.0%	3.0%	1235
Arauca	18.0%	18.3%	26.5%	35.0%	2.2%	2030
Armenia	16.7%	16.2%	26.2%	40.0%	1.0%	2026
Atlántico	17.3%	18.9%	24.6%	34.1%	5.1%	4445
Barrancabermeja	16.6%	18.3%	26.2%	36.1%	2.8%	1778
Barranquilla	17.6%	16.6%	25.3%	38.2%	2.3%	7999
Bello	16.3%	15.4%	25.2%	41.7%	1.5%	3080
Bogotá, D.C.	14.0%	13.1%	24.2%	45.9%	2.8%	52992
Bolívar	18.0%	21.7%	26.5%	29.2%	4.7%	7953
Boyacá	17.1%	18.2%	26.9%	36.3%	1.5%	7149
Bucaramanga	13.4%	13.8%	23.0%	48.3%	1.5%	3981
Buenaventura	17.5%	20.7%	23.3%	34.7%	3.8%	2559
Buga	12.8%	15.4%	26.3%	40.7%	4.7%	864
Caldas	15.4%	17.4%	27.0%	38.5%	1.8%	4335
Cali	15.6%	14.8%	24.6%	42.2%	2.8%	14284
Caquetá	18.7%	19.5%	26.1%	33.4%	2.3%	2306
Cartagena	16.0%	18.2%	24.2%	38.1%	3.5%	8176
Cartago	16.8%	14.7%	27.6%	38.3%	2.6%	798
Casanare	17.8%	21.3%	27.5%	31.3%	2.1%	2146
Cauca	17.0%	20.0%	23.9%	35.5%	3.7%	8893
Cesar	17.7%	18.7%	24.7%	36.4%	2.5%	6129
Chocó	16.1%	21.1%	22.9%	32.5%	7.4%	2815
Chía	12.4%	10.2%	24.7%	51.7%	0.9%	959
Ciénaga	16.6%	15.7%	24.6%	38.1%	5.1%	1135
Cundinamarca	14.7%	15.8%	27.1%	40.5%	1.8%	11860
Córdoba	17.8%	21.4%	25.8%	32.2%	2.9%	9412
Cúcuta	15.2%	15.2%	26.3%	42.0%	1.4%	5518
Dosquebradas	13.5%	16.3%	25.5%	43.0%	1.7%	1248
Duitama	9.6%	10.1%	22.9%	56.8%	0.6%	1037
Envigado	11.5%	10.4%	18.8%	58.6%	0.8%	1216
Facatativá	16.7%	13.7%	26.2%	42.6%	0.8%	1062
Florencia	17.2%	19.5%	27.1%	33.8%	2.4%	1475
Floridablanca	13.2%	13.9%	23.5%	48.0%	1.3%	1852
Fusagasugá	14.7%	15.5%	26.0%	42.5%	1.2%	1058
Girardot	15.6%	20.3%	26.3%	34.9%	3.0%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	18.2%	15.6%	25.9%	39.4%	0.9%	1011
Guainía	0.0%	0.0%	50.0%	50.0%	0.0%	2
Guaviare	19.3%	20.8%	24.6%	30.3%	4.9%	710
Huila	17.3%	18.9%	27.0%	35.5%	1.3%	6415
Ibagué	14.9%	13.6%	27.4%	42.2%	1.9%	3972
Ipiales	13.8%	15.5%	26.3%	43.1%	1.3%	1014
Itagüí	15.0%	17.1%	24.5%	41.5%	1.8%	1365
Jamundí	15.0%	18.8%	24.1%	39.7%	2.3%	871
La Guajira	17.9%	18.6%	25.7%	33.7%	4.1%	2481
Lorica	17.1%	23.0%	23.7%	32.9%	3.3%	1141
Magangué	17.0%	21.9%	27.6%	29.9%	3.6%	1220
Magdalena	17.7%	20.7%	25.0%	31.1%	5.5%	6289
Maicao	16.1%	21.3%	24.5%	31.2%	6.9%	1425
Malambo	19.5%	17.7%	23.5%	36.2%	3.0%	953
Manizales	14.4%	13.2%	25.9%	45.4%	1.1%	2324
Medellín	16.6%	17.2%	24.5%	39.7%	2.0%	16107
Meta	18.9%	19.5%	26.2%	32.3%	3.1%	3976
Montería	17.4%	18.4%	25.8%	36.2%	2.2%	3793
Mosquera	16.7%	13.1%	23.3%	45.2%	1.7%	880
Nariño	15.5%	17.7%	24.4%	38.9%	3.6%	7283
Neiva	15.1%	17.6%	28.3%	37.4%	1.6%	3000
Norte de Santander	16.8%	16.8%	25.9%	39.2%	1.3%	5754
Palmira	15.5%	14.4%	25.0%	42.7%	2.4%	2080
Pasto	14.7%	13.5%	28.0%	42.9%	0.9%	3134
Pereira	14.7%	14.9%	25.6%	43.0%	1.9%	3510
Piedecuesta	15.1%	13.0%	25.2%	45.2%	1.5%	1103
Pitalito	17.9%	17.5%	27.7%	34.8%	2.0%	1277
Popayán	15.4%	14.2%	27.8%	40.4%	2.2%	2100
Putumayo	16.6%	20.1%	26.8%	34.0%	2.6%	3241
Quibdó	18.3%	18.8%	24.3%	33.6%	5.1%	1068
Quindío	16.9%	16.6%	26.6%	38.3%	1.6%	2171
Riohacha	17.1%	20.7%	23.9%	34.5%	3.7%	1686
Rionegro	12.9%	12.6%	27.0%	47.0%	0.5%	838
Risaralda	17.6%	18.5%	26.5%	35.3%	2.1%	2244
Sabaneta	11.3%	12.9%	22.5%	51.7%	1.6%	373
Sahagún	17.7%	18.9%	26.0%	34.7%	2.6%	956
San Andrés	14.1%	20.3%	31.3%	29.1%	5.3%	454
Santa Marta	18.9%	17.4%	24.4%	35.4%	4.0%	4142
Santander	14.5%	14.6%	27.1%	42.3%	1.5%	6474

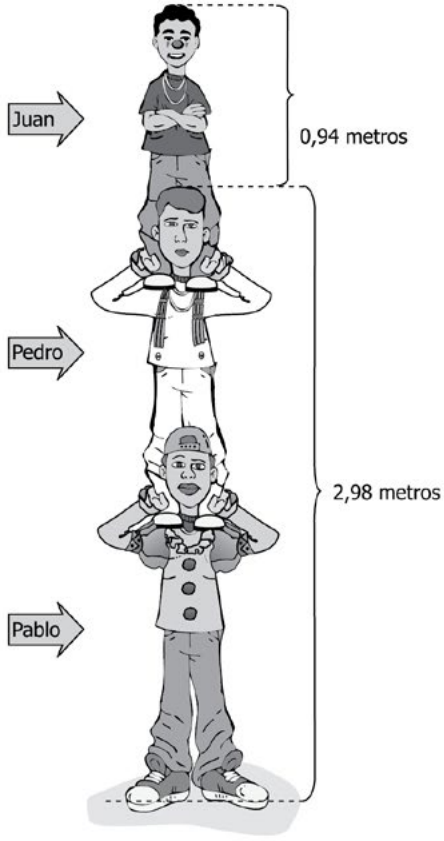
Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	17.4%	17.8%	24.4%	37.8%	2.6%	2541
Soacha	16.6%	15.4%	25.0%	41.4%	1.5%	4162
Sogamoso	13.3%	11.4%	24.9%	49.7%	0.6%	1088
Soledad	16.7%	17.9%	25.7%	38.2%	1.5%	3910
Sucre	17.9%	21.0%	25.5%	32.3%	3.2%	5581
Tolima	17.5%	18.8%	26.3%	35.1%	2.3%	7481
Tuluá	16.4%	14.7%	25.2%	41.7%	1.9%	1601
Tumaco	16.4%	20.3%	23.0%	31.1%	9.3%	1891
Tunja	14.4%	12.9%	25.2%	46.6%	1.0%	1342
Turbo	18.8%	22.1%	25.0%	28.6%	5.5%	1486
Uribia	21.3%	20.1%	30.0%	24.8%	3.7%	403
Valle del Cauca	16.8%	17.4%	26.9%	36.7%	2.1%	6241
Valledupar	16.5%	16.8%	24.9%	38.4%	3.3%	3540
Vaupés	0.0%	40.0%	20.0%	20.0%	20.0%	5
Vichada	17.4%	19.1%	26.7%	31.3%	5.4%	460
Villavicencio	15.1%	16.0%	27.3%	39.9%	1.6%	4039
Yopal	18.0%	15.4%	28.0%	36.6%	2.1%	1312
Yumbo	17.5%	16.8%	24.0%	39.2%	2.4%	941
Zipaquirá	15.1%	12.9%	26.2%	44.4%	1.4%	1026
Colombia	16.1%	16.9%	25.3%	39.0%	2.6%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 19.**

Juan, Pedro y Pablo son acróbatas. En el dibujo puedes observar una de sus presentaciones.



¿Cuál es la altura de la torre que formaron los acróbatas en la presentación?

A. 0,94 metros.
B. 2,98 metros.
C. 3,82 metros.
D. 3,92 metros.

• Estructura

Competencia	Comunicación, representación y modelación
Componente	Geométrico - métrico
Afirmación	Identificar unidades tanto estandarizadas como no convencionales apropiadas para diferentes mediciones y establecer relaciones entre ellas.
Nivel de desempeño	Avanzado
Respuesta correcta	D

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	20.5%	22.0%	18.1%	33.6%	5.7%	785
Antioquia	17.0%	19.3%	20.7%	39.9%	3.1%	21528
Apartadó	16.8%	20.8%	22.8%	36.0%	3.5%	1235
Arauca	15.3%	18.2%	19.7%	44.2%	2.6%	2030
Armenia	13.5%	16.2%	24.6%	44.1%	1.6%	2026
Atlántico	18.6%	20.4%	18.6%	36.6%	5.8%	4445
Barrancabermeja	14.8%	17.8%	21.0%	43.8%	2.7%	1778
Barranquilla	14.3%	18.1%	21.7%	43.2%	2.6%	7999
Bello	11.0%	17.1%	26.4%	43.9%	1.6%	3080
Bogotá, D.C.	8.6%	14.8%	22.5%	50.8%	3.4%	52992
Bolívar	22.5%	22.8%	18.3%	31.3%	5.2%	7953
Boyacá	16.7%	18.8%	20.4%	42.1%	2.0%	7149
Bucaramanga	9.4%	13.1%	19.8%	55.7%	2.0%	3981
Buenaventura	16.8%	20.1%	18.0%	40.5%	4.6%	2559
Buga	12.2%	14.9%	21.5%	46.6%	4.7%	864
Caldas	15.9%	17.6%	20.2%	44.0%	2.2%	4335
Cali	11.5%	16.9%	23.1%	45.1%	3.4%	14284
Caquetá	18.0%	18.4%	19.9%	41.0%	2.6%	2306
Cartagena	15.3%	19.8%	19.8%	41.6%	3.6%	8176
Cartago	13.2%	15.9%	25.6%	42.6%	2.8%	798
Casanare	15.7%	19.5%	20.9%	41.1%	2.7%	2146
Cauca	17.4%	19.4%	16.4%	42.7%	4.2%	8893
Cesar	18.8%	19.5%	18.4%	40.4%	2.8%	6129
Chocó	21.2%	23.5%	16.0%	31.5%	7.7%	2815
Chía	6.0%	14.2%	22.0%	56.2%	1.6%	959

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	17.4%	19.2%	16.7%	40.5%	6.1%	1135
Cundinamarca	11.6%	17.2%	20.8%	48.0%	2.4%	11860
Córdoba	22.5%	21.1%	17.7%	35.1%	3.6%	9412
Cúcuta	12.4%	17.0%	20.5%	48.2%	1.8%	5518
Dosquebradas	9.5%	16.3%	23.0%	49.8%	1.4%	1248
Duitama	7.5%	11.3%	19.3%	60.8%	1.1%	1037
Envigado	6.7%	11.5%	23.8%	57.3%	0.7%	1216
Facatativá	9.8%	15.1%	24.7%	49.1%	1.4%	1062
Florencia	15.2%	18.8%	24.1%	38.9%	3.0%	1475
Floridablanca	7.3%	13.8%	20.6%	56.2%	2.1%	1852
Fusagasugá	10.0%	15.1%	22.2%	50.9%	1.7%	1058
Girardot	14.0%	17.9%	23.4%	41.7%	3.0%	777
Girón	10.3%	18.0%	24.4%	45.5%	1.8%	1011
Guainía	0.0%	0.0%	0.0%	100.0%	0.0%	2
Guaviare	18.3%	19.0%	21.5%	35.8%	5.4%	710
Huila	15.8%	19.5%	20.2%	42.7%	1.7%	6415
Ibagué	10.8%	16.4%	20.4%	50.5%	1.9%	3972
Ipiales	11.1%	17.8%	19.0%	50.0%	2.1%	1014
Itagüí	12.9%	18.3%	24.4%	42.6%	1.8%	1365
Jamundí	14.2%	20.9%	22.2%	39.8%	2.9%	871
La Guajira	18.5%	20.7%	18.7%	37.4%	4.6%	2481
Lorica	22.1%	20.8%	19.3%	34.1%	3.8%	1141
Magangué	20.9%	20.7%	20.4%	33.6%	4.4%	1220
Magdalena	21.5%	22.3%	17.0%	33.5%	5.8%	6289
Maicao	20.9%	20.6%	16.5%	35.4%	6.6%	1425
Malambo	14.3%	18.7%	18.5%	44.8%	3.8%	953
Manizales	9.1%	16.3%	22.5%	50.3%	1.8%	2324
Medellín	12.5%	17.9%	24.2%	43.0%	2.4%	16107
Meta	15.6%	19.0%	21.4%	40.3%	3.7%	3976
Montería	18.1%	19.5%	19.9%	39.9%	2.6%	3793
Mosquera	8.9%	16.4%	24.8%	48.3%	1.7%	880
Nariño	14.3%	17.4%	17.4%	46.7%	4.1%	7283
Neiva	13.1%	17.8%	19.6%	47.4%	2.1%	3000
Norte de Santander	14.8%	17.5%	18.5%	47.0%	2.2%	5754
Palmira	10.6%	16.3%	22.3%	47.8%	3.1%	2080
Pasto	10.3%	16.2%	21.0%	50.9%	1.5%	3134
Pereira	11.2%	16.6%	22.4%	47.4%	2.4%	3510
Piedecuesta	12.1%	14.4%	19.1%	51.5%	2.9%	1103
Pitalito	14.4%	18.2%	20.0%	44.9%	2.4%	1277

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	10.2%	15.5%	19.4%	52.3%	2.6%	2100
Putumayo	15.4%	21.5%	19.9%	40.0%	3.1%	3241
Quibdó	17.5%	21.3%	20.4%	36.0%	4.8%	1068
Quindío	14.3%	18.1%	24.0%	41.8%	1.8%	2171
Riohacha	18.4%	21.4%	18.6%	37.2%	4.4%	1686
Rionegro	11.7%	14.6%	27.0%	45.7%	1.1%	838
Risaralda	16.1%	18.3%	22.5%	40.7%	2.4%	2244
Sabaneta	9.4%	14.2%	26.5%	47.5%	2.4%	373
Sahagún	21.4%	20.7%	19.5%	35.7%	2.7%	956
San Andrés	18.5%	20.9%	21.1%	33.9%	5.5%	454
Santa Marta	16.9%	18.9%	21.8%	38.5%	4.0%	4142
Santander	14.0%	16.5%	18.9%	48.7%	1.9%	6474
Sincelejo	16.2%	18.5%	20.5%	41.6%	3.2%	2541
Soacha	10.3%	17.5%	23.3%	47.2%	1.7%	4162
Sogamoso	7.3%	15.2%	18.8%	57.5%	1.3%	1088
Soledad	14.4%	19.3%	20.3%	44.2%	1.8%	3910
Sucre	22.4%	21.6%	18.3%	34.2%	3.4%	5581
Tolima	16.8%	18.5%	20.7%	41.2%	2.8%	7481
Tuluá	12.0%	18.3%	20.1%	46.7%	2.9%	1601
Tumaco	19.3%	23.0%	16.6%	31.4%	9.8%	1891
Tunja	9.8%	14.5%	22.5%	51.4%	1.7%	1342
Turbo	21.3%	25.0%	18.0%	28.7%	7.1%	1486
Uribia	22.6%	25.6%	19.1%	28.8%	4.0%	403
Valle del Cauca	14.9%	19.2%	21.8%	41.5%	2.6%	6241
Valledupar	16.4%	18.8%	19.2%	42.0%	3.7%	3540
Vaupés	0.0%	40.0%	40.0%	0.0%	20.0%	5
Vichada	18.0%	24.3%	15.4%	36.1%	6.1%	460
Villavicencio	10.4%	15.6%	20.6%	51.0%	2.4%	4039
Yopal	11.7%	17.7%	22.3%	46.0%	2.4%	1312
Yumbo	10.1%	18.0%	25.5%	43.8%	2.7%	941
Zipaquirá	9.3%	14.3%	20.6%	54.1%	1.8%	1026
Colombia	14.2%	18.0%	20.8%	43.9%	3.1%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 20.**

Juan tiene 321 fichas. ¿Cuántas decenas de fichas tiene Juan?

A. 3
B. 21
C. 32
D. 321

- **Estructura**

Competencia	Razonamiento y argumentación
Componente	Numérico - variacional
Afirmación	Usar y justificar propiedades (aditiva y posicional) del sistema de numeración decimal.
Nivel de desempeño	Avanzado
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	16.1%	16.7%	23.3%	37.3%	6.6%	785
Antioquia	14.6%	19.5%	35.4%	28.2%	2.4%	21528
Apartadó	18.8%	21.6%	26.5%	30.9%	2.3%	1235
Arauca	14.9%	21.3%	35.2%	26.6%	2.1%	2030
Armenia	15.4%	24.5%	37.7%	21.6%	0.8%	2026
Atlántico	17.1%	18.3%	27.6%	32.9%	4.2%	4445
Barrancabermeja	17.2%	21.5%	30.5%	28.6%	2.2%	1778
Barranquilla	15.1%	20.2%	34.4%	28.3%	2.1%	7999
Bello	16.4%	24.5%	35.9%	22.2%	1.0%	3080
Bogotá, D.C.	12.2%	22.5%	42.0%	20.4%	2.9%	52992
Bolívar	19.0%	17.1%	24.3%	35.2%	4.3%	7953
Boyacá	13.1%	21.8%	40.1%	23.7%	1.2%	7149
Bucaramanga	13.7%	22.8%	40.5%	21.0%	2.0%	3981
Buenaventura	16.9%	17.5%	28.8%	32.9%	3.9%	2559
Buga	12.2%	23.0%	36.2%	24.1%	4.5%	864
Caldas	13.8%	20.4%	36.1%	28.1%	1.5%	4335
Cali	16.5%	23.1%	33.7%	23.8%	2.9%	14284
Caquetá	14.4%	17.3%	37.6%	28.8%	2.0%	2306
Cartagena	18.1%	20.0%	30.2%	28.5%	3.2%	8176
Cartago	19.5%	24.2%	28.8%	25.4%	2.0%	798
Casanare	15.1%	19.5%	35.8%	27.7%	1.9%	2146
Cauca	13.7%	16.5%	34.9%	31.2%	3.7%	8893
Cesar	15.5%	16.1%	33.0%	33.2%	2.2%	6129
Chocó	18.4%	15.0%	24.7%	35.7%	6.3%	2815
Chía	11.2%	24.7%	46.3%	16.7%	1.1%	959
Ciénaga	12.5%	16.6%	26.0%	39.5%	5.5%	1135
Cundinamarca	12.5%	20.9%	40.9%	23.9%	1.8%	11860
Córdoba	16.2%	17.5%	30.5%	33.1%	2.7%	9412
Cúcuta	15.3%	24.4%	34.4%	24.5%	1.4%	5518
Dosquebradas	14.7%	23.4%	37.2%	23.6%	1.1%	1248
Duitama	11.8%	20.9%	50.5%	16.1%	0.7%	1037
Envigado	13.6%	24.3%	46.7%	15.0%	0.4%	1216
Facatativá	14.5%	23.0%	42.0%	19.8%	0.8%	1062
Florencia	16.0%	21.5%	28.2%	32.7%	1.6%	1475
Floridablanca	13.1%	24.0%	41.8%	19.3%	1.7%	1852
Fusagasugá	14.0%	25.8%	37.1%	21.5%	1.7%	1058
Girardot	17.1%	19.9%	31.4%	29.2%	2.3%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	15.4%	21.5%	38.5%	23.3%	1.3%	1011
Guainía	0.0%	0.0%	0.0%	100.0%	0.0%	2
Guaviare	14.1%	20.4%	33.7%	27.5%	4.4%	710
Huila	13.7%	19.3%	35.3%	30.5%	1.2%	6415
Ibagué	13.4%	23.8%	38.6%	22.3%	1.8%	3972
Ipiales	15.8%	24.3%	39.0%	20.2%	0.8%	1014
Itagüí	20.1%	23.1%	34.1%	21.1%	1.7%	1365
Jamundí	18.0%	17.7%	32.4%	29.6%	2.3%	871
La Guajira	16.6%	16.3%	29.0%	35.0%	3.0%	2481
Lorica	16.9%	19.0%	28.3%	33.3%	2.5%	1141
Magangué	18.6%	20.9%	24.1%	33.4%	3.0%	1220
Magdalena	16.5%	15.2%	26.7%	37.1%	4.5%	6289
Maicao	17.2%	17.7%	26.8%	32.4%	5.9%	1425
Malambo	12.8%	21.1%	31.1%	32.3%	2.7%	953
Manizales	13.5%	22.7%	38.9%	23.9%	1.0%	2324
Medellín	18.0%	23.8%	32.8%	23.6%	1.8%	16107
Meta	15.9%	21.3%	33.4%	26.4%	3.1%	3976
Montería	17.1%	21.5%	30.6%	29.0%	1.8%	3793
Mosquera	12.6%	22.7%	41.4%	21.8%	1.5%	880
Nariño	14.2%	17.4%	37.8%	27.4%	3.1%	7283
Neiva	14.7%	24.2%	32.2%	27.3%	1.7%	3000
Norte de Santander	13.4%	20.2%	38.3%	26.7%	1.4%	5754
Palmira	16.4%	22.4%	35.3%	23.7%	2.1%	2080
Pasto	13.8%	25.3%	37.0%	23.0%	0.9%	3134
Pereira	15.5%	22.6%	36.6%	23.0%	2.2%	3510
Piedecuesta	14.5%	22.6%	35.0%	26.1%	1.8%	1103
Pitalito	16.2%	21.8%	32.1%	28.4%	1.4%	1277
Popayán	14.5%	21.1%	39.8%	22.2%	2.3%	2100
Putumayo	16.0%	20.3%	34.0%	27.6%	2.1%	3241
Quibdó	17.3%	17.9%	27.5%	32.8%	4.5%	1068
Quindío	14.4%	21.8%	34.4%	28.0%	1.5%	2171
Riohacha	17.6%	17.0%	27.9%	34.4%	3.2%	1686
Rionegro	13.5%	24.6%	39.6%	21.8%	0.5%	838
Risaralda	14.5%	19.2%	34.0%	30.4%	1.9%	2244
Sabaneta	17.2%	24.9%	39.9%	16.4%	1.6%	373
Sahagún	14.4%	18.6%	35.4%	30.0%	1.6%	956
San Andrés	17.6%	22.5%	27.1%	28.0%	4.8%	454
Santa Marta	15.9%	18.5%	29.4%	32.5%	3.6%	4142
Santander	12.2%	20.6%	40.7%	25.1%	1.3%	6474

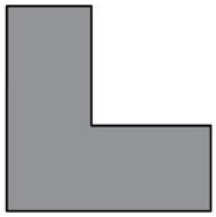
Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	17.5%	19.5%	32.1%	28.5%	2.4%	2541
Soacha	14.2%	21.3%	39.5%	23.7%	1.3%	4162
Sogamoso	12.9%	22.5%	44.9%	18.9%	0.7%	1088
Soledad	15.2%	21.1%	34.4%	28.2%	1.1%	3910
Sucre	16.2%	16.9%	28.7%	35.3%	2.8%	5581
Tolima	13.6%	18.8%	36.0%	29.5%	2.1%	7481
Tuluá	15.2%	21.5%	35.9%	25.7%	1.6%	1601
Tumaco	17.0%	16.0%	21.5%	36.8%	8.7%	1891
Tunja	14.6%	22.6%	40.6%	21.4%	0.8%	1342
Turbo	19.4%	14.5%	23.8%	36.7%	5.5%	1486
Uribia	18.1%	14.6%	21.8%	42.7%	2.7%	403
Valle del Cauca	15.7%	20.5%	33.3%	28.3%	2.2%	6241
Valledupar	15.2%	18.4%	31.6%	31.8%	2.9%	3540
Vaupés	20.0%	0.0%	40.0%	20.0%	20.0%	5
Vichada	12.0%	17.4%	34.1%	30.7%	5.9%	460
Villavicencio	13.8%	22.3%	39.4%	22.8%	1.8%	4039
Yopal	13.1%	23.7%	36.5%	24.6%	2.1%	1312
Yumbo	17.2%	22.6%	33.0%	25.4%	1.7%	941
Zipaquirá	12.2%	22.4%	42.4%	21.7%	1.3%	1026
Colombia	14.9%	20.6%	35.3%	26.7%	2.5%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

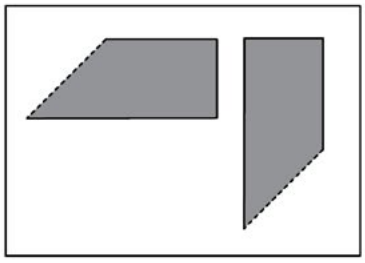
- **Pregunta 21.**

Ginna armó la siguiente figura utilizando dos piezas sin sobreponerlas.

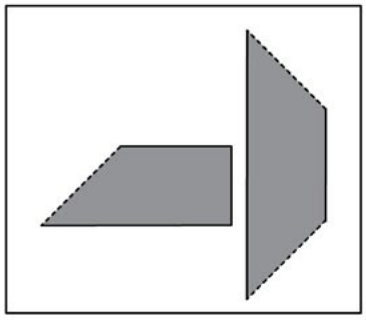


¿Cuál de las siguientes parejas de piezas utilizó Ginna para armar la figura?

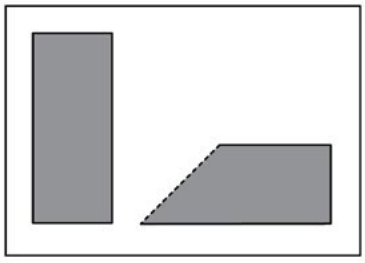
A.



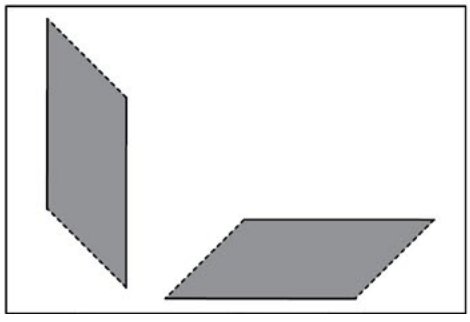
B.



C.



D.



• Estructura

Competencia	Razonamiento y argumentación
Componente	Geométrico - métrico
Afirmación	Construir y descomponer figuras planas y sólidos a partir de condiciones dadas.
Nivel de desempeño	Satisfactorio
Respuesta correcta	A

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	40.6%	8.3%	38.9%	6.1%	6.1%	785
Antioquia	50.0%	7.9%	32.1%	7.4%	2.5%	21528
Apartadó	47.4%	8.7%	33.1%	9.0%	1.9%	1235
Arauca	51.3%	8.7%	30.9%	7.2%	1.8%	2030
Armenia	55.2%	9.2%	27.1%	7.8%	0.7%	2026
Atlántico	39.9%	8.4%	38.6%	8.8%	4.3%	4445
Barrancabermeja	49.6%	8.0%	32.4%	7.4%	2.6%	1778
Barranquilla	51.0%	6.9%	32.5%	7.6%	1.9%	7999
Bello	54.9%	7.2%	28.9%	8.0%	1.0%	3080
Bogotá, D.C.	60.5%	5.9%	23.4%	7.3%	2.9%	52992
Bolívar	32.9%	11.0%	42.3%	9.4%	4.4%	7953
Boyacá	53.8%	7.7%	29.3%	8.0%	1.1%	7149
Bucaramanga	63.8%	5.6%	22.3%	6.7%	1.7%	3981
Buenaventura	45.1%	7.4%	35.3%	8.6%	3.5%	2559
Buga	53.6%	5.7%	30.0%	6.5%	4.3%	864
Caldas	54.9%	6.1%	30.6%	7.0%	1.5%	4335
Cali	54.1%	6.7%	28.6%	7.8%	2.8%	14284
Caquetá	48.9%	8.5%	32.1%	8.5%	2.0%	2306
Cartagena	46.1%	8.9%	34.3%	7.7%	3.0%	8176
Cartago	54.1%	8.4%	27.4%	7.9%	2.1%	798
Casanare	52.1%	6.8%	32.2%	7.2%	1.7%	2146
Cauca	45.9%	7.1%	35.1%	8.6%	3.4%	8893
Cesar	45.4%	7.1%	37.5%	7.6%	2.3%	6129
Chocó	32.6%	11.4%	42.0%	8.1%	5.9%	2815
Chía	63.5%	4.7%	23.7%	7.2%	0.9%	959

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	46.7%	5.3%	35.1%	7.6%	5.4%	1135
Cundinamarca	58.3%	5.9%	27.0%	7.0%	1.8%	11860
Córdoba	37.8%	9.8%	41.1%	8.6%	2.7%	9412
Cúcuta	54.0%	7.3%	30.1%	7.3%	1.2%	5518
Dosquebradas	58.0%	6.4%	26.5%	8.2%	0.9%	1248
Duitama	69.0%	4.5%	19.6%	6.3%	0.6%	1037
Envigado	65.6%	5.9%	22.0%	5.9%	0.5%	1216
Facatativá	60.8%	6.6%	25.6%	6.4%	0.6%	1062
Florencia	48.7%	8.7%	32.9%	8.0%	1.6%	1475
Floridablanca	64.0%	4.8%	23.1%	6.4%	1.7%	1852
Fusagasugá	58.8%	6.5%	26.5%	7.0%	1.2%	1058
Girardot	50.1%	6.9%	32.8%	6.9%	3.2%	777
Girón	55.8%	7.1%	29.9%	6.2%	1.0%	1011
Guainía	50.0%	0.0%	50.0%	0.0%	0.0%	2
Guaviare	44.6%	6.9%	35.5%	8.5%	4.5%	710
Huila	51.3%	6.7%	33.0%	7.8%	1.3%	6415
Ibagué	57.3%	6.2%	27.6%	7.3%	1.6%	3972
Ipiales	58.8%	6.4%	26.8%	6.9%	1.1%	1014
Itagüí	51.0%	10.3%	27.7%	9.4%	1.7%	1365
Jamundí	48.9%	8.2%	33.4%	7.1%	2.4%	871
La Guajira	39.5%	8.1%	40.7%	8.0%	3.7%	2481
Lorica	33.9%	11.3%	42.3%	10.0%	2.5%	1141
Magangué	34.7%	9.0%	43.3%	9.6%	3.4%	1220
Magdalena	34.7%	10.0%	41.0%	9.4%	4.8%	6289
Maicao	34.5%	11.9%	39.4%	8.3%	6.0%	1425
Malambo	50.2%	6.6%	33.8%	6.6%	2.8%	953
Manizales	58.4%	5.7%	27.5%	7.4%	1.0%	2324
Medellín	49.4%	9.9%	29.9%	9.1%	1.8%	16107
Meta	48.0%	8.1%	32.5%	8.2%	3.3%	3976
Montería	44.1%	8.4%	36.9%	8.9%	1.8%	3793
Mosquera	61.9%	5.3%	24.2%	6.9%	1.6%	880
Nariño	53.7%	6.3%	30.0%	6.7%	3.2%	7283
Neiva	50.2%	7.2%	31.9%	9.2%	1.5%	3000
Norte de Santander	51.8%	7.1%	32.5%	7.1%	1.4%	5754
Palmira	53.8%	6.5%	30.8%	7.0%	1.8%	2080
Pasto	61.5%	5.9%	24.3%	7.5%	0.7%	3134
Pereira	59.3%	5.7%	26.2%	7.0%	1.8%	3510
Piedecuesta	55.9%	6.9%	29.4%	6.4%	1.4%	1103
Pitalito	51.7%	7.5%	30.6%	8.4%	1.8%	1277

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	59.0%	5.4%	26.6%	6.9%	2.2%	2100
Putumayo	50.3%	8.8%	31.3%	7.6%	2.2%	3241
Quibdó	35.2%	9.8%	40.7%	9.1%	5.1%	1068
Quindío	53.3%	8.0%	29.4%	7.5%	1.8%	2171
Riohacha	39.7%	8.9%	40.5%	7.5%	3.5%	1686
Rionegro	62.6%	6.1%	25.4%	5.6%	0.2%	838
Risaralda	49.1%	7.0%	34.1%	8.0%	1.8%	2244
Sabaneta	62.5%	6.2%	22.8%	7.5%	1.1%	373
Sahagún	37.9%	9.0%	42.5%	9.4%	1.3%	956
San Andrés	38.5%	12.6%	33.9%	9.5%	5.5%	454
Santa Marta	45.4%	6.9%	35.9%	8.4%	3.4%	4142
Santander	55.5%	6.1%	30.3%	6.8%	1.2%	6474
Sincelejo	46.2%	7.6%	36.8%	7.1%	2.3%	2541
Soacha	58.3%	7.1%	25.2%	8.2%	1.2%	4162
Sogamoso	59.7%	5.5%	26.7%	7.6%	0.5%	1088
Soledad	51.6%	6.5%	33.1%	7.4%	1.3%	3910
Sucre	36.4%	9.6%	42.3%	8.5%	3.2%	5581
Tolima	48.1%	7.2%	34.6%	8.1%	2.0%	7481
Tuluá	54.2%	6.0%	30.0%	7.6%	2.1%	1601
Tumaco	34.3%	10.0%	38.6%	8.6%	8.5%	1891
Tunja	64.8%	5.7%	22.6%	6.0%	0.9%	1342
Turbo	34.8%	12.7%	38.1%	8.3%	6.1%	1486
Uribia	31.0%	13.9%	40.4%	11.7%	3.0%	403
Valle del Cauca	50.9%	7.5%	31.8%	7.6%	2.1%	6241
Valledupar	45.7%	7.1%	37.2%	7.2%	2.9%	3540
Vaupés	0.0%	40.0%	20.0%	20.0%	20.0%	5
Vichada	42.8%	9.3%	33.7%	8.9%	5.2%	460
Villavicencio	57.6%	7.1%	26.3%	7.4%	1.6%	4039
Yopal	57.5%	6.3%	28.0%	6.7%	1.5%	1312
Yumbo	51.3%	8.3%	31.7%	7.1%	1.6%	941
Zipaquirá	63.7%	4.2%	24.1%	6.7%	1.3%	1026
Colombia	51.3%	7.4%	31.1%	7.8%	2.5%	366782

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

Responde las preguntas 22 Y 23 de acuerdo con el siguiente texto:

Los costos de las entradas al circo se presentan en la siguiente tabla:

ENTRADA AL CIRCO	
	Costo
Adulto	$ 6.000
Niño	$ 4.000

- **Pregunta 22.**

¿Cuánto deben pagar 5 adultos para entrar en el circo?

A. $ 6.000
B. $10.000
C. $20.000
D. $30.000

- **Estructura**

Competencia	Planteamiento y resolución de problemas
Componente	Numérico - variacional
Afirmación	Resolver y formular problemas multiplicativos rutinarios y no rutinarios de adición repetida, factor multiplicante, razón y producto cartesiano.
Nivel de desempeño	Mínimo
Respuesta correcta	D

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	12.1%	10.4%	4.2%	69.4%	3.8%	785
Antioquia	6.8%	5.4%	4.0%	82.8%	1.0%	21531
Apartadó	6.6%	7.3%	3.7%	81.4%	1.1%	1236
Arauca	5.7%	5.7%	3.1%	84.6%	0.9%	2030
Armenia	4.8%	5.6%	3.7%	85.7%	0.3%	2024
Atlántico	10.9%	9.8%	5.1%	71.6%	2.7%	4442
Barrancabermeja	6.1%	5.2%	3.1%	84.4%	1.2%	1778
Barranquilla	6.4%	5.9%	4.2%	82.8%	0.7%	7996
Bello	4.6%	3.7%	4.1%	87.4%	0.3%	3080
Bogotá, D.C.	2.8%	3.0%	3.1%	89.2%	1.9%	52988
Bolívar	15.7%	12.6%	6.3%	63.1%	2.3%	7955
Boyacá	5.4%	4.7%	3.9%	85.4%	0.6%	7149
Bucaramanga	2.5%	2.4%	2.5%	92.2%	0.4%	3980
Buenaventura	8.4%	7.3%	3.9%	78.7%	1.7%	2558
Buga	3.6%	5.2%	2.8%	85.0%	3.5%	864
Caldas	4.2%	5.1%	3.2%	86.9%	0.6%	4335
Cali	4.7%	4.2%	3.6%	86.0%	1.5%	14287
Caquetá	7.7%	6.7%	4.1%	80.2%	1.2%	2298
Cartagena	9.5%	7.7%	4.8%	76.8%	1.2%	8181
Cartago	4.4%	5.4%	3.5%	86.1%	0.6%	798
Casanare	5.9%	4.9%	3.9%	84.2%	1.0%	2150
Cauca	8.2%	7.3%	4.0%	78.9%	1.6%	8897
Cesar	8.5%	7.9%	4.3%	78.0%	1.3%	6127
Chocó	18.5%	9.8%	5.3%	62.5%	3.8%	2815
Chía	2.0%	2.9%	2.7%	92.2%	0.2%	958
Ciénaga	11.8%	6.3%	5.7%	73.5%	2.6%	1135
Cundinamarca	3.7%	4.1%	3.0%	88.6%	0.6%	11858
Córdoba	12.1%	10.2%	5.9%	70.1%	1.7%	9413
Cúcuta	4.5%	5.3%	3.3%	86.5%	0.4%	5518
Dosquebradas	3.5%	4.2%	2.8%	88.7%	0.7%	1248
Duitama	1.9%	1.5%	1.7%	94.7%	0.1%	1035
Envigado	3.2%	2.7%	2.5%	91.5%	0.1%	1218
Facatativá	2.5%	3.4%	3.5%	90.6%	0.0%	1064
Florencia	5.9%	6.0%	3.3%	84.1%	0.7%	1474
Floridablanca	2.5%	3.1%	2.1%	91.9%	0.5%	1854
Fusagasugá	2.9%	4.7%	3.1%	89.0%	0.2%	1058
Girardot	5.1%	5.7%	4.2%	84.0%	0.9%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	3.0%	3.3%	3.1%	90.1%	0.6%	1013
Guainía	0.0%	33.3%	0.0%	66.7%	0.0%	3
Guaviare	8.7%	7.2%	3.9%	78.6%	1.6%	709
Huila	5.1%	6.4%	3.9%	84.0%	0.5%	6415
Ibagué	3.3%	4.2%	3.2%	88.6%	0.6%	3973
Ipiales	3.3%	3.4%	2.7%	89.9%	0.8%	1014
Itagüí	4.0%	4.8%	5.0%	85.0%	1.3%	1364
Jamundí	4.5%	6.2%	5.2%	82.8%	1.4%	871
La Guajira	11.2%	9.0%	5.7%	72.5%	1.6%	2482
Lorica	15.0%	11.1%	6.3%	66.2%	1.4%	1141
Magangué	12.1%	10.5%	6.6%	68.9%	2.0%	1220
Magdalena	14.7%	10.2%	5.8%	66.1%	3.1%	6283
Maicao	12.6%	7.9%	5.8%	69.3%	4.4%	1425
Malambo	6.8%	7.5%	3.8%	80.1%	1.9%	953
Manizales	3.1%	3.0%	2.9%	90.7%	0.4%	2322
Medellín	6.1%	5.7%	4.3%	83.3%	0.6%	16104
Meta	6.4%	5.4%	3.7%	82.8%	1.7%	3977
Montería	8.3%	7.9%	5.3%	77.4%	1.1%	3791
Mosquera	3.4%	2.7%	3.3%	90.3%	0.2%	880
Nariño	6.6%	5.7%	3.6%	81.9%	2.1%	7282
Neiva	4.8%	6.3%	3.9%	84.6%	0.3%	3000
Norte de Santander	5.5%	5.2%	3.4%	85.3%	0.5%	5753
Palmira	3.8%	4.8%	3.6%	86.9%	0.9%	2079
Pasto	2.6%	3.9%	2.6%	90.6%	0.3%	3137
Pereira	2.6%	4.2%	3.2%	89.4%	0.6%	3510
Piedecuesta	5.2%	4.4%	2.3%	88.1%	0.1%	1103
Pitalito	4.8%	4.9%	3.5%	86.5%	0.4%	1277
Popayán	3.2%	4.4%	3.0%	88.4%	0.9%	2102
Putumayo	6.1%	6.0%	3.9%	83.0%	1.0%	3240
Quibdó	11.4%	9.9%	4.5%	72.8%	1.4%	1068
Quindío	4.3%	5.9%	3.3%	85.9%	0.6%	2172
Riohacha	11.2%	6.8%	4.3%	76.4%	1.3%	1684
Rionegro	2.5%	3.0%	3.0%	91.5%	0.0%	838
Risaralda	5.5%	5.5%	2.9%	85.1%	0.9%	2245
Sabaneta	3.7%	5.9%	1.3%	89.1%	0.0%	375
Sahagún	10.4%	10.9%	5.8%	72.6%	0.4%	956
San Andrés	13.9%	8.8%	5.7%	71.4%	0.2%	454
Santa Marta	7.4%	6.2%	4.1%	80.7%	1.7%	4144
Santander	4.4%	4.4%	3.4%	87.2%	0.5%	6470

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	8.4%	7.6%	4.4%	78.5%	1.0%	2541
Soacha	3.4%	4.1%	3.5%	88.7%	0.4%	4164
Sogamoso	3.0%	3.1%	2.4%	91.1%	0.4%	1088
Soledad	7.0%	5.9%	4.0%	82.6%	0.6%	3913
Sucre	14.1%	10.5%	6.1%	67.4%	1.8%	5581
Tolima	6.6%	7.0%	4.3%	81.0%	1.0%	7479
Tuluá	4.2%	3.8%	3.6%	87.8%	0.5%	1602
Tumaco	16.2%	9.0%	5.9%	64.9%	3.9%	1891
Tunja	3.1%	3.1%	2.5%	91.1%	0.3%	1342
Turbo	15.8%	9.0%	6.1%	65.8%	3.2%	1484
Uribia	22.6%	11.9%	8.7%	55.3%	1.5%	403
Valle del Cauca	5.2%	6.0%	3.9%	83.8%	1.1%	6241
Valledupar	8.0%	7.4%	4.4%	78.5%	1.7%	3544
Vaupés	0.0%	42.9%	0.0%	42.9%	14.3%	7
Vichada	8.7%	7.4%	5.0%	76.5%	2.4%	460
Villavicencio	3.3%	3.4%	3.1%	89.9%	0.3%	4036
Yopal	3.6%	3.4%	2.8%	89.3%	0.8%	1313
Yumbo	5.0%	5.1%	4.5%	85.1%	0.3%	941
Zipaquirá	3.5%	2.0%	2.3%	91.6%	0.5%	1026
Colombia	6.3%	5.7%	3.9%	82.8%	1.2%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 23.**

Un grupo de niños pagó en total por las entradas al circo $24.000. ¿Cuántos niños formaban el grupo?

A. 6
B. 8
C. 10
D. 12

- **Estructura**

Competencia	Planteamiento y resolución de problemas
Componente	Numérico - variacional
Afirmación	Resolver y formular problemas multiplicativos rutinarios y no rutinarios de adición repetida, factor multiplicante, razón y producto cartesiano.
Nivel de desempeño	Mínimo
Respuesta correcta	A

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	52.7%	13.4%	12.4%	17.3%	4.2%	785
Antioquia	67.9%	8.6%	8.5%	13.7%	1.3%	21531
Apartadó	64.9%	11.3%	10.0%	12.7%	1.1%	1236
Arauca	73.6%	8.6%	6.7%	10.0%	1.1%	2030
Armenia	72.0%	8.6%	8.5%	10.4%	0.5%	2024
Atlántico	59.5%	10.5%	11.3%	15.8%	2.9%	4442
Barrancabermeja	70.5%	9.4%	8.1%	10.8%	1.2%	1778
Barranquilla	70.5%	9.7%	7.0%	11.9%	0.9%	7996
Bello	74.7%	8.1%	6.7%	10.0%	0.5%	3080
Bogotá, D.C.	76.7%	7.2%	5.8%	8.2%	2.0%	52988
Bolívar	52.1%	13.7%	13.4%	18.0%	2.8%	7955
Boyacá	73.9%	8.0%	7.0%	10.3%	0.7%	7149
Bucaramanga	82.2%	5.6%	4.4%	7.1%	0.7%	3980
Buenaventura	67.2%	8.1%	8.1%	14.2%	2.5%	2558
Buga	68.8%	7.6%	7.1%	12.7%	3.8%	864
Caldas	72.3%	7.9%	7.1%	11.9%	0.7%	4335
Cali	71.5%	8.8%	6.9%	11.0%	1.8%	14287
Caquetá	66.5%	9.4%	7.7%	14.5%	1.8%	2298
Cartagena	64.4%	10.6%	10.1%	13.1%	1.7%	8181
Cartago	72.8%	9.4%	8.5%	8.4%	0.9%	798
Casanare	70.5%	8.8%	7.1%	12.4%	1.2%	2150
Cauca	65.6%	8.4%	8.3%	15.7%	2.0%	8897
Cesar	65.8%	9.7%	8.2%	14.8%	1.5%	6127
Chocó	49.0%	11.6%	11.2%	23.7%	4.5%	2815
Chía	77.8%	8.2%	5.3%	8.2%	0.4%	958
Ciénaga	63.3%	10.5%	6.7%	17.2%	2.4%	1135
Cundinamarca	75.8%	7.5%	6.2%	9.7%	0.7%	11858
Córdoba	54.5%	12.6%	12.0%	19.0%	1.9%	9413
Cúcuta	76.9%	6.6%	6.5%	9.4%	0.7%	5518
Dosquebradas	75.2%	7.7%	6.2%	10.3%	0.6%	1248
Duitama	86.7%	5.3%	3.5%	4.3%	0.2%	1035
Envigado	81.4%	6.7%	4.9%	6.6%	0.3%	1218
Facatativá	80.0%	6.3%	5.8%	7.9%	0.0%	1064
Florencia	68.0%	10.0%	7.6%	13.2%	1.2%	1474
Floridablanca	80.3%	7.2%	5.4%	6.5%	0.7%	1854
Fusagasugá	76.2%	7.8%	6.4%	9.0%	0.6%	1058
Girardot	70.4%	8.1%	9.0%	11.8%	0.6%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	76.6%	7.4%	6.3%	9.2%	0.5%	1013
Guainía	33.3%	33.3%	33.3%	0.0%	0.0%	3
Guaviare	65.9%	10.2%	7.3%	14.0%	2.7%	709
Huila	71.0%	8.4%	8.0%	12.0%	0.7%	6415
Ibagué	76.0%	8.6%	5.9%	8.7%	0.8%	3973
Ipiales	77.3%	6.8%	4.9%	9.9%	1.1%	1014
Itagüí	69.2%	9.1%	8.8%	11.3%	1.6%	1364
Jamundí	66.6%	8.6%	7.5%	15.3%	2.1%	871
La Guajira	59.7%	10.6%	11.2%	16.4%	2.1%	2482
Lorica	51.3%	14.5%	13.5%	19.3%	1.5%	1141
Magangué	55.8%	12.2%	11.7%	17.7%	2.5%	1220
Magdalena	54.2%	12.6%	11.5%	18.3%	3.3%	6283
Maicao	56.4%	12.9%	11.0%	14.7%	4.9%	1425
Malambo	68.6%	9.0%	7.8%	12.3%	2.3%	953
Manizales	75.5%	6.6%	6.1%	11.1%	0.6%	2322
Medellín	69.0%	9.6%	9.4%	11.3%	0.7%	16104
Meta	68.6%	9.1%	8.1%	11.8%	2.3%	3977
Montería	62.8%	11.4%	9.8%	14.8%	1.3%	3791
Mosquera	77.7%	6.7%	6.8%	8.3%	0.5%	880
Nariño	70.6%	7.7%	6.4%	12.9%	2.4%	7282
Neiva	74.1%	8.8%	6.9%	9.4%	0.8%	3000
Norte de Santander	74.8%	7.8%	5.9%	10.7%	0.7%	5753
Palmira	72.9%	8.5%	5.9%	11.6%	1.1%	2079
Pasto	79.8%	6.5%	5.3%	7.9%	0.5%	3137
Pereira	75.2%	7.9%	6.3%	9.7%	0.9%	3510
Piedecuesta	79.4%	5.9%	5.8%	8.4%	0.5%	1103
Pitalito	73.3%	6.7%	7.0%	12.7%	0.4%	1277
Popayán	76.8%	6.9%	4.9%	10.1%	1.2%	2102
Putumayo	69.4%	9.8%	7.1%	12.5%	1.2%	3240
Quibdó	59.2%	12.5%	10.3%	14.8%	3.2%	1068
Quindío	68.5%	9.1%	9.6%	11.9%	0.9%	2172
Riohacha	62.5%	11.5%	9.1%	15.4%	1.6%	1684
Rionegro	76.5%	7.6%	6.0%	9.8%	0.1%	838
Risaralda	69.0%	8.7%	7.3%	13.9%	1.0%	2245
Sabaneta	76.3%	8.0%	6.1%	9.3%	0.3%	375
Sahagún	58.8%	12.6%	11.4%	15.9%	1.4%	956
San Andrés	56.8%	12.3%	12.1%	18.5%	0.2%	454
Santa Marta	68.8%	9.4%	7.5%	12.7%	1.7%	4144
Santander	74.9%	8.0%	6.3%	10.2%	0.7%	6470

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	63.2%	9.4%	10.0%	16.1%	1.2%	2541
Soacha	76.3%	7.5%	6.6%	9.0%	0.6%	4164
Sogamoso	83.0%	5.8%	3.9%	6.9%	0.5%	1088
Soledad	70.1%	10.1%	7.7%	11.1%	1.0%	3913
Sucre	54.1%	11.9%	12.4%	19.4%	2.2%	5581
Tolima	68.4%	8.6%	8.7%	13.2%	1.2%	7479
Tuluá	71.0%	9.4%	7.6%	11.4%	0.6%	1602
Tumaco	53.4%	13.4%	12.5%	16.6%	4.2%	1891
Tunja	78.2%	7.7%	5.6%	8.3%	0.2%	1342
Turbo	49.7%	13.3%	11.9%	21.4%	3.7%	1484
Uribia	47.4%	16.4%	11.9%	21.1%	3.2%	403
Valle del Cauca	68.0%	9.2%	8.1%	13.6%	1.2%	6241
Valledupar	67.2%	9.1%	7.8%	13.9%	2.0%	3544
Vaupés	14.3%	0.0%	28.6%	42.9%	14.3%	7
Vichada	60.2%	9.6%	8.9%	18.9%	2.4%	460
Villavicencio	79.2%	7.3%	5.7%	7.4%	0.4%	4036
Yopal	78.0%	7.5%	4.6%	9.1%	0.8%	1313
Yumbo	69.8%	9.7%	8.5%	11.9%	0.1%	941
Zipaquirá	81.7%	6.6%	4.1%	7.3%	0.3%	1026
Colombia	69.8%	8.9%	7.8%	12.0%	1.5%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

Responde las preguntas 24 Y 25 de acuerdo con el siguiente texto:

Ana, Juan, José y Daniela participaron en una práctica de tiro al blanco. La tabla muestra los resultados de los participantes.

Participantes	Intentos	Aciertos
Ana	20	15
Juan	30	15
José	20	10
Daniela	30	10

- **Pregunta 24.**

¿Cuántos intentos y aciertos tuvo José en la práctica de tiro al blanco?

A. 30 intentos, 15 aciertos.
B. 30 intentos, 10 aciertos.
C. 20 intentos, 15 aciertos.
D. 20 intentos, 10 aciertos.

- **Estructura**

Competencia	Comunicación, representación y modelación
Componente	Aleatorio
Afirmación	Describir e Interpretar datos relativos a situaciones del entorno escolar.
Nivel de desempeño	Mínimo
Respuesta correcta	D

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	14.1%	10.4%	11.8%	59.5%	4.1%	785
Antioquia	9.1%	8.0%	9.6%	71.7%	1.6%	21531
Apartadó	8.7%	9.9%	9.9%	70.0%	1.5%	1236
Arauca	7.3%	6.9%	8.5%	76.0%	1.3%	2030
Armenia	7.3%	6.9%	8.5%	76.8%	0.5%	2024
Atlántico	12.3%	11.1%	12.0%	60.8%	3.8%	4442
Barrancabermeja	7.7%	6.2%	8.4%	76.2%	1.5%	1778
Barranquilla	8.2%	6.7%	8.8%	75.0%	1.3%	7996
Bello	6.5%	5.5%	7.3%	79.9%	0.8%	3080
Bogotá, D.C.	5.3%	4.4%	5.9%	82.4%	2.1%	52988
Bolívar	14.0%	13.7%	14.7%	54.1%	3.4%	7955
Boyacá	7.3%	6.4%	8.7%	76.6%	0.9%	7149
Bucaramanga	4.8%	4.2%	6.1%	84.3%	0.6%	3980
Buenaventura	12.0%	8.4%	9.3%	67.2%	3.1%	2558
Buga	7.9%	6.6%	7.5%	74.4%	3.6%	864
Caldas	7.7%	7.0%	8.4%	75.9%	1.0%	4335
Cali	7.1%	5.8%	7.0%	78.3%	1.8%	14287
Caquetá	10.8%	9.4%	11.7%	66.3%	1.8%	2298
Cartagena	9.4%	8.4%	10.4%	69.4%	2.3%	8181
Cartago	7.0%	6.9%	7.0%	77.8%	1.3%	798
Casanare	7.6%	7.6%	9.7%	73.8%	1.3%	2150
Cauca	11.1%	9.5%	11.1%	66.0%	2.3%	8897
Cesar	11.3%	8.8%	10.7%	67.3%	1.8%	6127
Chocó	16.9%	13.4%	16.7%	48.5%	4.5%	2815
Chía	4.9%	4.4%	6.1%	84.2%	0.4%	958
Ciénaga	11.7%	9.4%	11.3%	64.2%	3.3%	1135
Cundinamarca	6.8%	5.5%	6.6%	80.2%	0.9%	11858
Córdoba	13.3%	11.3%	13.4%	59.4%	2.6%	9413
Cúcuta	6.7%	6.2%	7.3%	79.0%	0.8%	5518
Dosquebradas	6.3%	4.6%	6.3%	81.7%	1.0%	1248
Duitama	5.4%	4.1%	4.5%	85.6%	0.4%	1035
Envigado	5.2%	3.0%	5.3%	86.1%	0.4%	1218
Facatativá	7.5%	4.8%	6.3%	81.1%	0.3%	1064
Florencia	9.2%	7.2%	11.1%	71.2%	1.2%	1474
Floridablanca	5.5%	3.9%	5.6%	84.3%	0.7%	1854
Fusagasugá	6.9%	6.0%	6.6%	79.9%	0.6%	1058
Girardot	8.5%	6.6%	7.6%	75.9%	1.4%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	7.6%	5.4%	6.0%	80.3%	0.7%	1013
Guainía	0.0%	33.3%	33.3%	33.3%	0.0%	3
Guaviare	10.4%	8.2%	11.0%	67.6%	2.8%	709
Huila	8.5%	7.7%	9.5%	73.5%	0.8%	6415
Ibagué	6.3%	5.5%	8.1%	79.0%	1.0%	3973
Ipiales	6.1%	6.0%	7.2%	79.8%	0.9%	1014
Itagüí	5.9%	6.0%	8.1%	78.2%	1.8%	1364
Jamundí	8.4%	5.6%	10.0%	74.6%	1.4%	871
La Guajira	12.7%	10.6%	10.9%	63.1%	2.7%	2482
Lorica	14.5%	13.1%	14.1%	55.9%	2.4%	1141
Magangué	12.5%	9.4%	11.6%	63.5%	3.0%	1220
Magdalena	14.8%	12.6%	14.1%	54.6%	4.0%	6283
Maicao	13.2%	11.3%	12.2%	58.5%	4.8%	1425
Malambo	10.4%	8.7%	10.8%	67.5%	2.6%	953
Manizales	6.0%	4.6%	6.2%	82.6%	0.7%	2322
Medellín	8.1%	7.2%	8.3%	75.4%	1.1%	16104
Meta	7.6%	7.9%	9.6%	72.7%	2.3%	3977
Montería	10.1%	8.9%	10.1%	69.5%	1.5%	3791
Mosquera	5.2%	4.4%	4.7%	85.1%	0.6%	880
Nariño	9.2%	7.5%	9.6%	71.1%	2.6%	7282
Neiva	8.3%	7.2%	8.2%	75.6%	0.8%	3000
Norte de Santander	7.9%	6.5%	8.5%	76.1%	1.0%	5753
Palmira	6.1%	6.0%	6.5%	80.0%	1.3%	2079
Pasto	5.4%	4.7%	7.1%	82.4%	0.4%	3137
Pereira	7.2%	5.2%	6.8%	80.0%	0.9%	3510
Piedecuesta	7.9%	5.9%	6.1%	79.6%	0.5%	1103
Pitalito	7.3%	6.6%	8.8%	76.7%	0.6%	1277
Popayán	6.2%	4.4%	6.9%	81.4%	1.1%	2102
Putumayo	8.1%	8.8%	9.9%	71.9%	1.4%	3240
Quibdó	16.0%	9.8%	12.6%	57.5%	4.0%	1068
Quindío	9.1%	7.5%	8.3%	74.1%	1.0%	2172
Riohacha	12.3%	9.7%	9.9%	66.4%	1.7%	1684
Rionegro	5.7%	3.7%	6.7%	83.8%	0.1%	838
Risaralda	9.0%	7.0%	9.0%	73.6%	1.4%	2245
Sabaneta	5.1%	3.5%	8.3%	83.2%	0.0%	375
Sahagún	11.1%	11.5%	12.4%	63.8%	1.2%	956
San Andrés	10.4%	10.8%	12.8%	65.4%	0.7%	454
Santa Marta	9.4%	8.3%	8.6%	71.6%	2.2%	4144
Santander	7.1%	6.3%	7.8%	77.8%	1.0%	6470

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	10.0%	9.0%	9.4%	69.8%	1.9%	2541
Soacha	5.9%	5.4%	6.3%	81.6%	0.8%	4164
Sogamoso	3.7%	4.1%	5.9%	85.9%	0.4%	1088
Soledad	8.6%	6.2%	9.4%	74.7%	1.1%	3913
Sucre	12.8%	12.9%	13.0%	58.7%	2.6%	5581
Tolima	9.5%	8.4%	9.7%	70.9%	1.4%	7479
Tuluá	6.4%	7.4%	7.0%	78.0%	1.2%	1602
Tumaco	16.2%	10.9%	14.4%	53.0%	5.4%	1891
Tunja	5.1%	3.9%	6.0%	84.3%	0.7%	1342
Turbo	14.3%	11.2%	15.2%	55.7%	3.7%	1484
Uribia	19.6%	17.6%	11.9%	48.1%	2.7%	403
Valle del Cauca	8.7%	7.2%	8.1%	74.5%	1.6%	6241
Valledupar	9.7%	8.4%	9.3%	70.6%	2.0%	3544
Vaupés	14.3%	0.0%	0.0%	71.4%	14.3%	7
Vichada	12.8%	10.7%	9.1%	64.1%	3.3%	460
Villavicencio	6.4%	4.8%	6.5%	81.7%	0.5%	4036
Yopal	6.2%	4.8%	6.6%	81.3%	1.0%	1313
Yumbo	9.5%	5.8%	8.2%	75.9%	0.6%	941
Zipaquirá	5.7%	5.2%	6.2%	82.2%	0.8%	1026
Colombia	8.5%	7.2%	8.8%	73.8%	1.7%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 25.**

¿Cuál de los participantes en la práctica tuvo mejor puntería?

A. Ana.
B. Juan.
C. José.
D. Daniela.

- **Estructura**

Competencia	Comunicación, representación y modelación
Componente	Aleatorio
Afirmación	Describir e Interpretar datos relativos a situaciones del entorno escolar.
Nivel de desempeño	Satisfactorio
Respuesta correcta	A

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	29.4%	46.4%	11.0%	10.2%	3.1%	785
Antioquia	45.0%	35.4%	9.3%	8.6%	1.6%	21531
Apartadó	39.6%	39.0%	10.6%	9.4%	1.4%	1236
Arauca	46.2%	34.9%	9.7%	7.8%	1.4%	2030
Armenia	53.7%	31.9%	7.1%	6.5%	0.9%	2024
Atlántico	35.3%	37.8%	12.6%	10.1%	4.1%	4442
Barrancabermeja	50.4%	31.9%	8.4%	7.4%	1.9%	1778
Barranquilla	48.1%	35.5%	8.1%	6.8%	1.4%	7996
Bello	57.7%	29.6%	6.4%	5.3%	0.9%	3080
Bogotá, D.C.	58.4%	28.7%	5.5%	5.0%	2.3%	52988
Bolívar	27.0%	41.7%	14.8%	13.3%	3.2%	7955
Boyacá	47.3%	34.7%	8.9%	8.2%	1.0%	7149
Bucaramanga	62.9%	26.6%	5.2%	4.5%	0.8%	3980
Buenaventura	38.9%	39.8%	10.6%	8.0%	2.7%	2558
Buga	49.4%	33.9%	6.1%	6.7%	3.8%	864
Caldas	46.8%	36.6%	8.8%	6.9%	0.9%	4335
Cali	53.0%	32.6%	6.1%	6.1%	2.2%	14287
Caquetá	39.8%	38.6%	11.4%	8.6%	1.7%	2298
Cartagena	41.9%	38.0%	9.7%	8.3%	2.1%	8181
Cartago	51.9%	32.5%	8.0%	6.3%	1.4%	798
Casanare	40.2%	39.0%	10.5%	8.5%	1.8%	2150
Cauca	39.5%	36.7%	12.0%	9.4%	2.4%	8897
Cesar	37.8%	39.6%	12.0%	8.8%	1.8%	6127
Chocó	28.5%	37.6%	15.2%	13.6%	5.1%	2815
Chía	62.7%	26.3%	5.7%	4.6%	0.6%	958
Ciénaga	40.3%	38.6%	10.7%	7.2%	3.2%	1135
Cundinamarca	51.9%	32.7%	7.7%	6.6%	1.1%	11858
Córdoba	32.1%	40.2%	13.0%	11.9%	2.8%	9413
Cúcuta	52.1%	34.4%	6.6%	5.8%	1.0%	5518
Dosquebradas	54.6%	33.3%	5.7%	5.0%	1.4%	1248
Duitama	66.5%	22.6%	6.0%	4.4%	0.5%	1035
Envigado	71.3%	20.8%	3.4%	4.2%	0.4%	1218
Facatativá	55.7%	30.5%	8.0%	5.0%	0.8%	1064
Florencia	47.2%	33.8%	9.7%	8.3%	1.0%	1474
Floridablanca	60.6%	28.9%	5.4%	4.2%	0.9%	1854
Fusagasugá	52.8%	31.7%	7.2%	7.5%	0.9%	1058
Girardot	46.1%	38.5%	7.3%	7.2%	0.9%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	51.5%	35.5%	6.4%	5.8%	0.7%	1013
Guainía	33.3%	0.0%	66.7%	0.0%	0.0%	3
Guaviare	44.7%	32.0%	12.1%	8.9%	2.3%	709
Huila	42.0%	37.5%	11.6%	8.0%	0.9%	6415
Ibagué	55.8%	30.8%	6.4%	6.0%	1.0%	3973
Ipiales	54.1%	31.5%	7.5%	5.5%	1.4%	1014
Itagüí	59.5%	26.8%	5.3%	6.5%	1.9%	1364
Jamundí	48.8%	34.3%	7.7%	7.1%	2.1%	871
La Guajira	32.8%	38.2%	15.1%	11.2%	2.7%	2482
Lorica	31.1%	39.8%	14.0%	13.3%	1.8%	1141
Magangué	32.2%	44.3%	11.0%	9.6%	3.0%	1220
Magdalena	29.3%	39.0%	14.5%	13.3%	4.0%	6283
Maicao	32.8%	38.4%	13.1%	10.1%	5.6%	1425
Malambo	41.2%	36.5%	12.5%	7.6%	2.2%	953
Manizales	59.2%	28.9%	5.5%	5.8%	0.6%	2322
Medellín	54.9%	29.2%	7.3%	7.3%	1.2%	16104
Meta	43.5%	36.5%	9.3%	8.2%	2.5%	3977
Montería	40.1%	39.6%	9.4%	9.6%	1.3%	3791
Mosquera	61.5%	27.3%	5.7%	4.7%	0.9%	880
Nariño	45.0%	34.2%	10.5%	7.5%	2.8%	7282
Neiva	47.3%	35.3%	8.5%	7.7%	1.1%	3000
Norte de Santander	47.6%	34.9%	9.2%	7.1%	1.2%	5753
Palmira	51.0%	35.1%	6.8%	5.4%	1.6%	2079
Pasto	56.6%	31.5%	5.5%	5.6%	0.8%	3137
Pereira	54.9%	32.9%	6.2%	4.9%	1.1%	3510
Piedecuesta	53.7%	31.0%	7.3%	7.1%	0.9%	1103
Pitalito	48.6%	32.8%	9.8%	7.7%	1.1%	1277
Popayán	58.7%	28.7%	6.4%	4.6%	1.7%	2102
Putumayo	42.5%	37.3%	11.0%	7.5%	1.6%	3240
Quibdó	37.7%	36.7%	11.5%	10.8%	3.3%	1068
Quindío	46.3%	37.5%	8.1%	6.8%	1.3%	2172
Riohacha	34.9%	39.7%	13.7%	9.4%	2.3%	1684
Rionegro	59.3%	26.8%	7.4%	5.5%	1.0%	838
Risaralda	43.2%	38.8%	8.5%	8.2%	1.3%	2245
Sabaneta	63.5%	25.3%	4.8%	5.1%	1.3%	375
Sahagún	34.3%	41.3%	13.0%	9.9%	1.5%	956
San Andrés	37.9%	37.4%	11.5%	12.8%	0.4%	454
Santa Marta	44.2%	37.0%	9.4%	7.3%	2.2%	4144
Santander	51.1%	31.7%	8.9%	7.2%	1.1%	6470

Continúa en la siguiente página

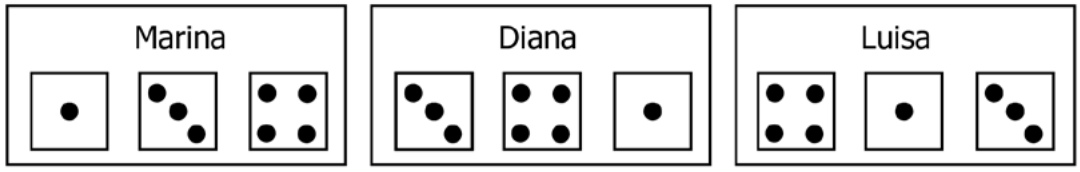
ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	39.2%	40.5%	9.7%	8.7%	1.9%	2541
Soacha	54.0%	32.4%	7.4%	5.2%	1.0%	4164
Sogamoso	62.4%	26.9%	5.1%	5.1%	0.5%	1088
Soledad	46.2%	37.0%	8.4%	7.2%	1.2%	3913
Sucre	30.6%	40.5%	14.2%	12.2%	2.4%	5581
Tolima	41.7%	37.0%	10.5%	9.1%	1.7%	7479
Tuluá	51.6%	32.7%	7.5%	6.9%	1.3%	1602
Tumaco	31.9%	39.1%	12.2%	11.7%	5.1%	1891
Tunja	61.2%	25.0%	6.3%	6.8%	0.7%	1342
Turbo	31.9%	39.7%	13.3%	10.0%	5.1%	1484
Uribia	22.6%	39.2%	19.6%	16.6%	2.0%	403
Valle del Cauca	47.1%	35.6%	8.7%	6.9%	1.7%	6241
Valledupar	43.6%	35.9%	10.3%	7.8%	2.4%	3544
Vaupés	14.3%	57.1%	14.3%	0.0%	14.3%	7
Vichada	36.1%	35.7%	15.0%	10.4%	2.8%	460
Villavicencio	54.6%	31.5%	7.3%	5.7%	0.9%	4036
Yopal	55.1%	30.2%	7.5%	5.6%	1.6%	1313
Yumbo	48.4%	34.3%	9.5%	6.8%	1.1%	941
Zipaquirá	55.8%	30.1%	7.4%	6.0%	0.6%	1026
Colombia	47.6%	34.1%	8.8%	7.6%	1.9%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 26.**

Marina, Diana y Luisa juegan a los dados. Cada una lanza tres dados y suma los puntos que aparecen en las caras superiores.

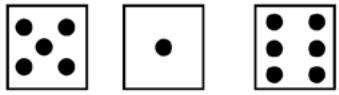
Observa los puntos obtenidos por cada una de ellas, en un lanzamiento.



Diana y Marina lanzaron nuevamente los dados y obtuvieron la misma cantidad de puntos. Observa los puntos que obtuvo cada una.

¿Cuál de las siguientes figuras muestra los puntos obtenidos por Marina?

A.



B.

C.

D.

• Estructura

Competencia	Razonamiento y argumentación
Componente	Numérico - variacional
Afirmación	Justificar y generar equivalencias entre expresiones numéricas.
Nivel de desempeño	Satisfactorio
Respuesta correcta	A

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	46.9%	12.1%	19.2%	18.3%	3.4%	785
Antioquia	56.8%	11.9%	17.3%	12.3%	1.7%	21531
Apartadó	54.5%	13.3%	18.9%	12.0%	1.3%	1236
Arauca	57.7%	10.6%	20.4%	9.8%	1.5%	2030
Armenia	60.2%	11.7%	18.2%	9.1%	0.7%	2024
Atlántico	52.3%	11.1%	19.2%	14.0%	3.4%	4442
Barrancabermeja	59.5%	12.1%	18.3%	8.1%	2.0%	1778
Barranquilla	58.7%	11.8%	18.0%	10.2%	1.3%	7996
Bello	60.1%	12.0%	16.7%	9.9%	1.2%	3080
Bogotá, D.C.	61.7%	9.7%	17.5%	8.6%	2.5%	52988
Bolívar	47.5%	13.3%	20.0%	16.1%	3.1%	7955
Boyacá	56.8%	11.7%	19.9%	10.6%	1.0%	7149
Bucaramanga	63.6%	9.4%	17.1%	8.6%	1.3%	3980
Buenaventura	58.2%	10.4%	17.0%	11.4%	3.0%	2558
Buga	58.1%	10.3%	17.2%	10.3%	4.1%	864
Caldas	59.9%	10.6%	18.5%	9.8%	1.2%	4335
Cali	62.6%	10.4%	17.0%	7.6%	2.4%	14287
Caquetá	56.8%	10.8%	18.3%	12.1%	1.9%	2298
Cartagena	57.5%	12.0%	18.4%	9.9%	2.2%	8181
Cartago	62.3%	11.7%	18.4%	6.6%	1.0%	798
Casanare	55.5%	12.8%	19.3%	10.5%	1.9%	2150
Cauca	57.5%	9.9%	16.8%	12.9%	2.9%	8897
Cesar	56.5%	10.7%	18.9%	12.1%	1.7%	6127
Chocó	46.5%	11.8%	17.5%	19.4%	4.8%	2815
Chía	66.1%	10.0%	14.1%	8.6%	1.3%	958

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	57.8%	10.9%	16.7%	10.5%	4.1%	1135
Cundinamarca	60.8%	10.9%	17.7%	9.4%	1.3%	11858
Córdoba	51.6%	12.1%	19.1%	15.0%	2.2%	9413
Cúcuta	59.5%	11.1%	18.9%	9.4%	1.1%	5518
Dosquebradas	63.6%	11.2%	15.4%	8.4%	1.4%	1248
Duitama	65.6%	9.8%	16.9%	7.6%	0.1%	1035
Envigado	67.0%	8.9%	14.4%	9.2%	0.5%	1218
Facatativá	64.2%	8.8%	17.8%	8.5%	0.8%	1064
Florencia	56.9%	11.9%	18.2%	11.5%	1.4%	1474
Floridablanca	62.4%	10.5%	17.3%	8.7%	1.2%	1854
Fusagasugá	64.5%	9.4%	16.7%	8.1%	1.3%	1058
Girardot	60.1%	11.7%	19.2%	7.6%	1.4%	777
Girón	60.9%	12.8%	18.2%	7.2%	0.9%	1013
Guainía	66.7%	0.0%	33.3%	0.0%	0.0%	3
Guaviare	58.4%	11.3%	16.6%	10.7%	3.0%	709
Huila	57.4%	11.8%	19.0%	10.7%	1.1%	6415
Ibagué	61.2%	10.9%	18.6%	7.8%	1.5%	3973
Ipiales	66.4%	8.9%	17.3%	6.5%	1.0%	1014
Itagüí	57.5%	12.0%	17.6%	11.3%	1.6%	1364
Jamundí	58.0%	9.3%	18.6%	11.8%	2.3%	871
La Guajira	51.9%	12.1%	19.0%	14.3%	2.6%	2482
Lorica	47.6%	15.2%	18.8%	16.2%	2.3%	1141
Magangué	48.4%	12.4%	21.9%	14.6%	2.7%	1220
Magdalena	47.4%	12.8%	19.8%	16.3%	3.8%	6283
Maicao	51.3%	12.0%	18.6%	13.1%	5.0%	1425
Malambo	59.5%	9.9%	17.6%	10.3%	2.7%	953
Manizales	61.0%	10.5%	19.3%	8.5%	0.7%	2322
Medellín	56.1%	12.9%	18.4%	11.2%	1.3%	16104
Meta	55.7%	11.3%	19.1%	10.9%	2.9%	3977
Montería	55.2%	12.5%	19.1%	11.8%	1.3%	3791
Mosquera	63.3%	12.3%	15.3%	8.3%	0.8%	880
Nariño	60.6%	9.5%	15.7%	11.2%	3.0%	7282
Neiva	58.5%	12.5%	19.4%	8.6%	1.0%	3000
Norte de Santander	60.0%	11.1%	18.9%	9.0%	1.0%	5753
Palmira	62.1%	9.4%	18.1%	8.4%	2.1%	2079
Pasto	63.4%	11.1%	17.1%	7.5%	1.0%	3137
Pereira	61.4%	10.1%	18.0%	9.0%	1.6%	3510
Piedecuesta	63.6%	10.0%	17.3%	8.0%	1.1%	1103
Pitalito	56.1%	11.6%	19.8%	11.4%	1.2%	1277

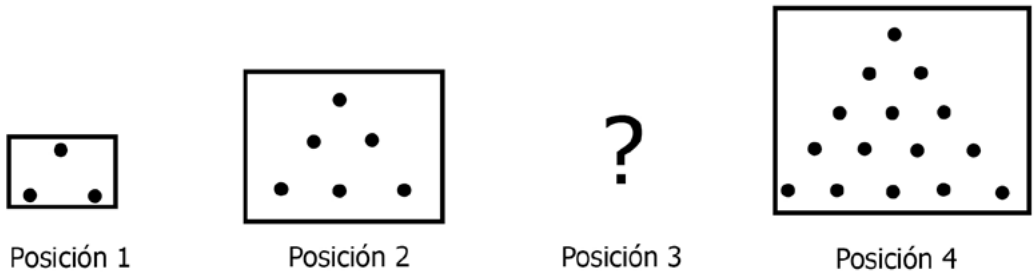
Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	62.5%	11.1%	15.8%	8.1%	2.5%	2102
Putumayo	56.1%	11.7%	19.8%	10.6%	1.8%	3240
Quibdó	51.8%	11.7%	19.1%	14.5%	2.9%	1068
Quindío	59.0%	10.3%	18.7%	10.7%	1.3%	2172
Riohacha	53.1%	12.9%	19.5%	12.2%	2.3%	1684
Rionegro	61.2%	12.1%	16.8%	9.3%	0.6%	838
Risaralda	58.7%	10.5%	18.5%	10.5%	1.9%	2245
Sabaneta	66.7%	8.5%	16.5%	7.5%	0.8%	375
Sahagún	53.1%	11.9%	19.6%	13.7%	1.7%	956
San Andrés	49.6%	16.5%	20.5%	12.8%	0.7%	454
Santa Marta	58.1%	11.3%	19.1%	9.4%	2.1%	4144
Santander	62.3%	10.2%	17.5%	8.9%	1.1%	6470
Sincelejo	56.1%	11.6%	20.1%	10.4%	1.8%	2541
Soacha	63.5%	9.1%	17.2%	9.2%	1.0%	4164
Sogamoso	63.4%	9.1%	18.0%	8.7%	0.7%	1088
Soledad	59.9%	11.5%	17.4%	9.8%	1.4%	3913
Sucre	50.0%	13.2%	19.0%	15.5%	2.3%	5581
Tolima	56.9%	11.5%	18.4%	11.5%	1.6%	7479
Tuluá	64.0%	10.3%	16.9%	7.6%	1.2%	1602
Tumaco	45.1%	13.5%	21.3%	15.4%	4.7%	1891
Tunja	62.1%	9.2%	20.1%	8.0%	0.6%	1342
Turbo	48.3%	14.2%	17.7%	16.1%	3.8%	1484
Uribia	44.7%	17.1%	20.8%	15.9%	1.5%	403
Valle del Cauca	60.2%	11.1%	17.4%	9.2%	2.0%	6241
Valledupar	59.0%	10.0%	18.6%	9.8%	2.6%	3544
Vaupés	14.3%	0.0%	14.3%	42.9%	28.6%	7
Vichada	47.8%	12.2%	17.0%	20.0%	3.0%	460
Villavicencio	63.5%	10.1%	17.5%	7.9%	0.9%	4036
Yopal	60.4%	10.2%	17.5%	10.1%	1.8%	1313
Yumbo	61.2%	9.8%	16.3%	11.8%	1.0%	941
Zipaquirá	61.5%	9.1%	20.6%	7.8%	1.1%	1026
Colombia	58.2%	11.1%	18.1%	10.6%	2.0%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

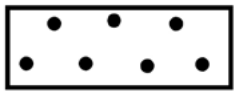
- **Pregunta 27.**

Observa la secuencia de figuras formadas por puntos. En esta secuencia falta la figura que corresponde a la posición 3.

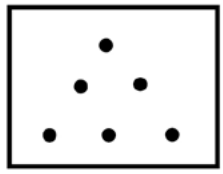


¿Cuál es la figura que corresponde a la posición 3?

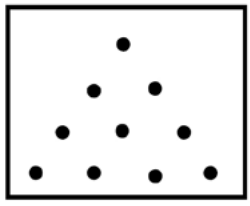
A.



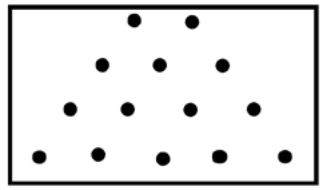
B.



C.



D.



• Estructura

Competencia	Planteamiento y resolución de problemas
Componente	Geométrico - métrico
Afirmación	Usar representaciones geométricas y establecer relaciones entre ellas para solucionar problemas.
Nivel de desempeño	Mínimo
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	12.6%	15.7%	54.5%	14.0%	3.2%	785
Antioquia	13.1%	9.7%	64.7%	11.0%	1.5%	21531
Apartadó	12.4%	11.2%	63.3%	11.4%	1.7%	1236
Arauca	10.0%	9.0%	69.7%	10.1%	1.3%	2030
Armenia	8.4%	8.5%	73.6%	8.9%	0.6%	2024
Atlántico	13.3%	14.0%	55.8%	13.7%	3.2%	4442
Barrancabermeja	10.6%	7.5%	71.9%	8.5%	1.5%	1778
Barranquilla	11.5%	8.7%	67.8%	10.8%	1.1%	7996
Bello	9.9%	7.8%	72.3%	9.6%	0.5%	3080
Bogotá, D.C.	6.5%	4.7%	79.3%	7.6%	2.0%	52988
Bolívar	15.7%	17.6%	48.0%	15.7%	2.9%	7955
Boyacá	9.7%	8.1%	71.2%	10.1%	0.9%	7149
Bucaramanga	6.6%	4.8%	80.7%	7.4%	0.5%	3980
Buenaventura	13.4%	14.1%	57.8%	11.8%	2.9%	2558
Buga	9.3%	5.3%	73.3%	8.4%	3.7%	864
Caldas	11.1%	8.5%	69.7%	9.7%	0.9%	4335
Cali	8.9%	7.0%	72.7%	9.6%	1.9%	14287
Caquetá	14.3%	12.4%	60.0%	11.4%	2.0%	2298
Cartagena	12.4%	11.1%	63.3%	11.4%	1.8%	8181
Cartago	9.1%	7.1%	73.1%	9.9%	0.8%	798
Casanare	10.8%	8.4%	68.2%	11.3%	1.2%	2150
Cauca	13.0%	12.4%	59.4%	13.0%	2.2%	8897
Cesar	14.8%	11.9%	60.1%	11.8%	1.4%	6127
Chocó	15.5%	20.4%	43.9%	16.1%	4.2%	2815
Chía	4.5%	4.7%	82.8%	7.7%	0.3%	958

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	15.2%	14.2%	54.9%	12.2%	3.5%	1135
Cundinamarca	8.7%	6.3%	76.0%	8.3%	0.8%	11858
Córdoba	15.9%	14.1%	54.3%	13.8%	1.9%	9413
Cúcuta	9.2%	7.1%	74.5%	8.6%	0.6%	5518
Dosquebradas	8.9%	6.1%	75.3%	9.0%	0.7%	1248
Duitama	4.6%	4.3%	84.5%	6.3%	0.3%	1035
Envigado	5.5%	5.3%	81.9%	7.1%	0.2%	1218
Facatativá	7.9%	4.4%	80.7%	6.9%	0.1%	1064
Florencia	10.0%	10.2%	69.5%	9.3%	0.9%	1474
Floridablanca	6.6%	3.5%	82.4%	7.0%	0.6%	1854
Fusagasugá	9.3%	5.5%	76.3%	8.6%	0.4%	1058
Girardot	9.8%	8.0%	70.7%	10.3%	1.3%	777
Girón	8.3%	7.0%	76.4%	7.9%	0.4%	1013
Guainía	0.0%	33.3%	66.7%	0.0%	0.0%	3
Guaviare	13.7%	11.4%	61.8%	10.2%	3.0%	709
Huila	12.7%	8.2%	68.0%	10.5%	0.8%	6415
Ibagué	8.1%	7.0%	75.9%	8.4%	0.6%	3973
Ipiales	8.4%	4.8%	77.5%	8.2%	1.1%	1014
Itagüí	11.0%	7.7%	70.8%	9.1%	1.4%	1364
Jamundí	11.9%	7.1%	67.6%	11.4%	2.0%	871
La Guajira	14.6%	13.9%	54.3%	15.1%	2.1%	2482
Lorica	14.9%	16.5%	51.8%	15.2%	1.7%	1141
Magangué	17.0%	14.0%	54.2%	12.0%	2.8%	1220
Magdalena	16.3%	17.0%	48.0%	15.0%	3.6%	6283
Maicao	12.6%	15.3%	52.0%	14.7%	5.4%	1425
Malambo	12.3%	10.4%	64.7%	9.9%	2.7%	953
Manizales	8.5%	5.5%	76.5%	9.1%	0.4%	2322
Medellín	10.8%	8.7%	69.2%	10.4%	0.9%	16104
Meta	11.3%	8.9%	68.0%	9.7%	2.1%	3977
Montería	12.8%	10.5%	64.0%	11.7%	1.0%	3791
Mosquera	7.5%	4.3%	77.7%	9.5%	0.9%	880
Nariño	11.3%	9.4%	66.2%	10.7%	2.4%	7282
Neiva	9.6%	7.9%	72.3%	9.5%	0.6%	3000
Norte de Santander	11.6%	8.3%	69.1%	10.2%	0.8%	5753
Palmira	7.8%	6.6%	75.5%	9.0%	1.2%	2079
Pasto	6.9%	5.4%	79.2%	8.1%	0.4%	3137
Pereira	8.8%	6.3%	75.0%	8.8%	1.1%	3510
Piedecuesta	8.7%	6.1%	77.1%	7.7%	0.5%	1103
Pitalito	12.6%	7.8%	70.0%	9.0%	0.6%	1277

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	7.7%	5.8%	76.4%	9.1%	1.0%	2102
Putumayo	11.8%	9.3%	67.6%	10.0%	1.4%	3240
Quibdó	11.8%	14.2%	57.3%	13.9%	2.8%	1068
Quindío	11.1%	8.6%	68.5%	11.0%	0.9%	2172
Riohacha	15.0%	14.3%	55.5%	13.4%	1.8%	1684
Rionegro	6.8%	4.9%	79.8%	8.2%	0.2%	838
Risaralda	12.3%	8.5%	67.7%	10.9%	0.6%	2245
Sabaneta	6.7%	5.1%	80.5%	7.2%	0.5%	375
Sahagún	11.9%	11.4%	61.7%	13.8%	1.2%	956
San Andrés	11.7%	14.1%	59.7%	13.7%	0.9%	454
Santa Marta	11.6%	9.9%	66.1%	10.6%	1.8%	4144
Santander	10.1%	7.5%	71.9%	9.8%	0.6%	6470
Sincelejo	12.2%	10.5%	64.8%	11.1%	1.4%	2541
Soacha	9.1%	6.0%	76.5%	8.0%	0.5%	4164
Sogamoso	5.7%	5.5%	80.5%	7.7%	0.6%	1088
Soledad	11.4%	8.7%	68.2%	11.1%	0.7%	3913
Sucre	16.3%	14.1%	52.0%	15.4%	2.3%	5581
Tolima	12.1%	10.0%	63.9%	12.5%	1.5%	7479
Tuluá	9.1%	6.5%	73.2%	10.0%	1.1%	1602
Tumaco	15.8%	16.9%	50.4%	12.1%	4.9%	1891
Tunja	6.6%	5.6%	80.6%	6.9%	0.3%	1342
Turbo	18.1%	16.5%	47.5%	13.5%	4.3%	1484
Uribia	17.1%	23.1%	41.9%	16.4%	1.5%	403
Valle del Cauca	11.6%	9.2%	66.8%	11.2%	1.2%	6241
Valledupar	12.5%	9.8%	63.0%	12.7%	2.1%	3544
Vaupés	28.6%	14.3%	42.9%	0.0%	14.3%	7
Vichada	14.1%	12.4%	57.2%	14.1%	2.2%	460
Villavicencio	8.2%	5.6%	77.2%	8.6%	0.5%	4036
Yopal	6.4%	5.3%	78.8%	8.4%	1.1%	1313
Yumbo	10.6%	10.2%	69.1%	9.5%	0.6%	941
Zipaquirá	6.6%	4.6%	79.3%	8.7%	0.8%	1026
Colombia	10.7%	8.9%	68.5%	10.4%	1.6%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 28.**

Observa la figura 1.

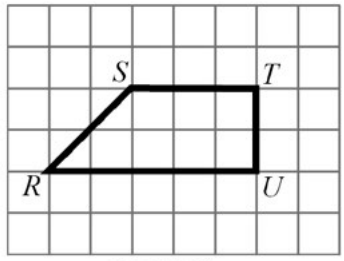
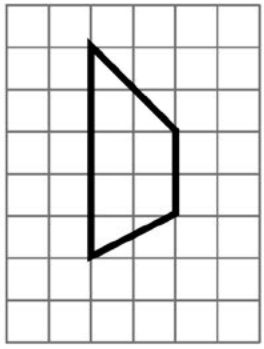


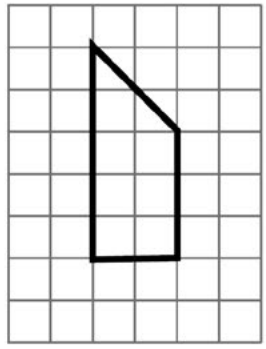
Figura 1.

¿Cuál de las siguientes figuras tiene sus lados y ángulos iguales a los de la figura 1?

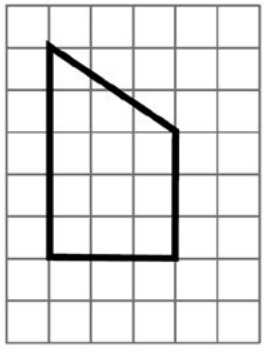
A.



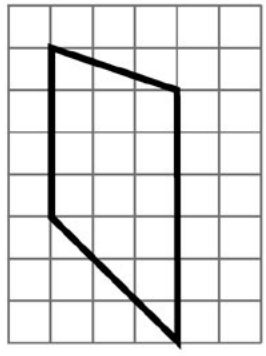
B.



C.



D.



• Estructura

Competencia	Razonamiento y argumentación
Componente	Geométrico - métrico
Afirmación	Conjeturar y verificar los resultados de aplicar transformaciones a figuras en el plano
Nivel de desempeño	Mínimo
Respuesta correcta	B

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	8.3%	75.5%	7.8%	4.3%	4.1%	785
Antioquia	7.6%	82.4%	5.2%	3.1%	1.6%	21531
Apartadó	8.7%	80.0%	5.7%	3.9%	1.6%	1236
Arauca	6.5%	85.7%	4.0%	2.6%	1.2%	2030
Armenia	7.5%	85.2%	3.7%	3.2%	0.5%	2024
Atlántico	12.4%	72.0%	7.3%	4.8%	3.5%	4442
Barrancabermeja	9.3%	82.2%	4.8%	2.4%	1.2%	1778
Barranquilla	10.4%	81.4%	4.6%	2.5%	1.1%	7996
Bello	8.0%	85.2%	4.0%	2.2%	0.6%	3080
Bogotá, D.C.	6.4%	87.0%	3.2%	1.4%	2.0%	52988
Bolívar	12.6%	69.4%	9.0%	5.9%	3.1%	7955
Boyacá	7.3%	84.0%	5.0%	2.8%	0.9%	7149
Bucaramanga	7.1%	88.5%	2.6%	1.3%	0.6%	3980
Buenaventura	8.8%	78.4%	5.7%	3.9%	3.2%	2558
Buga	8.7%	83.1%	2.5%	2.0%	3.7%	864
Caldas	7.0%	86.1%	3.9%	2.1%	0.8%	4335
Cali	8.2%	83.6%	4.1%	2.1%	2.0%	14287
Caquetá	8.2%	80.5%	5.6%	3.7%	1.9%	2298
Cartagena	11.1%	76.9%	6.2%	3.9%	1.8%	8181
Cartago	8.1%	83.2%	4.6%	2.9%	1.1%	798
Casanare	7.4%	84.3%	4.8%	2.4%	1.0%	2150
Cauca	8.0%	79.7%	6.0%	4.0%	2.3%	8897
Cesar	9.8%	79.2%	5.3%	4.0%	1.8%	6127
Chocó	11.4%	64.9%	11.2%	7.7%	4.9%	2815
Chía	7.5%	87.9%	2.7%	1.5%	0.4%	958

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	10.7%	76.7%	5.6%	3.8%	3.2%	1135
Cundinamarca	6.7%	86.7%	3.6%	2.0%	1.0%	11858
Córdoba	12.0%	73.6%	7.4%	4.7%	2.3%	9413
Cúcuta	8.1%	85.6%	3.9%	1.7%	0.7%	5518
Dosquebradas	7.1%	86.6%	3.4%	2.2%	0.7%	1248
Duitama	6.8%	88.5%	3.2%	1.4%	0.1%	1035
Envigado	7.3%	87.3%	3.8%	1.1%	0.5%	1218
Facatativá	6.9%	88.3%	3.8%	0.9%	0.1%	1064
Florencia	8.6%	83.4%	4.1%	2.5%	1.4%	1474
Floridablanca	6.7%	88.2%	3.0%	1.3%	0.8%	1854
Fusagasugá	7.6%	88.0%	2.6%	1.3%	0.5%	1058
Girardot	10.2%	81.9%	3.7%	2.8%	1.4%	777
Girón	8.3%	85.7%	3.6%	1.5%	1.0%	1013
Guainía	66.7%	0.0%	33.3%	0.0%	0.0%	3
Guaviare	9.0%	78.7%	4.7%	4.8%	2.8%	709
Huila	7.8%	84.3%	4.3%	2.8%	0.7%	6415
Ibagué	8.5%	84.7%	3.8%	2.2%	0.8%	3973
Ipiales	7.6%	87.0%	3.6%	1.1%	0.8%	1014
Itagüí	8.3%	80.7%	5.9%	3.4%	1.6%	1364
Jamundí	8.5%	83.4%	4.0%	2.6%	1.5%	871
La Guajira	11.0%	73.4%	7.6%	5.2%	2.8%	2482
Lorica	10.6%	73.7%	9.2%	4.6%	1.9%	1141
Magangué	14.5%	71.2%	6.7%	4.8%	2.7%	1220
Magdalena	11.9%	69.4%	8.6%	6.0%	4.1%	6283
Maicao	13.2%	65.4%	9.1%	7.2%	5.2%	1425
Malambo	12.3%	76.6%	5.0%	3.5%	2.6%	953
Manizales	6.5%	87.3%	4.1%	1.6%	0.6%	2322
Medellín	9.0%	81.0%	5.6%	3.3%	1.1%	16104
Meta	7.4%	81.4%	5.3%	3.6%	2.2%	3977
Montería	11.6%	78.0%	5.0%	3.9%	1.5%	3791
Mosquera	7.5%	87.4%	3.0%	1.3%	0.9%	880
Nariño	6.3%	83.2%	5.4%	2.7%	2.4%	7282
Neiva	9.5%	82.1%	5.1%	2.8%	0.5%	3000
Norte de Santander	7.6%	84.0%	4.5%	2.9%	1.0%	5753
Palmira	7.8%	86.2%	3.4%	1.3%	1.3%	2079
Pasto	6.2%	87.1%	4.0%	2.1%	0.5%	3137
Pereira	6.8%	86.9%	3.6%	1.9%	0.9%	3510
Piedecuesta	7.6%	86.1%	3.4%	2.2%	0.6%	1103
Pitalito	8.2%	83.9%	4.3%	3.0%	0.6%	1277

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	6.8%	87.1%	3.6%	1.4%	1.1%	2102
Putumayo	7.3%	82.7%	5.2%	3.5%	1.4%	3240
Quibdó	11.7%	71.4%	8.9%	4.8%	3.2%	1068
Quindío	8.6%	84.0%	3.8%	2.6%	0.9%	2172
Riohacha	13.3%	72.3%	7.1%	5.0%	2.3%	1684
Rionegro	5.7%	88.8%	3.8%	1.4%	0.2%	838
Risaralda	7.7%	84.0%	4.5%	2.3%	1.5%	2245
Sabaneta	8.3%	85.9%	4.3%	1.1%	0.5%	375
Sahagún	10.1%	77.9%	6.4%	4.2%	1.4%	956
San Andrés	13.4%	71.4%	8.4%	5.5%	1.3%	454
Santa Marta	11.1%	79.0%	5.3%	2.6%	2.0%	4144
Santander	6.4%	86.3%	3.9%	2.4%	1.0%	6470
Sincelejo	11.5%	78.3%	5.0%	3.7%	1.5%	2541
Soacha	7.8%	86.6%	3.5%	1.7%	0.5%	4164
Sogamoso	7.1%	86.9%	4.1%	1.3%	0.6%	1088
Soledad	10.5%	80.6%	5.0%	3.1%	0.8%	3913
Sucre	12.3%	72.0%	8.1%	5.3%	2.4%	5581
Tolima	8.7%	81.0%	5.2%	3.6%	1.6%	7479
Tuluá	8.9%	83.4%	4.4%	2.2%	1.1%	1602
Tumaco	9.0%	72.4%	7.9%	5.2%	5.5%	1891
Tunja	5.0%	89.8%	2.8%	2.0%	0.4%	1342
Turbo	10.8%	70.3%	9.8%	4.7%	4.3%	1484
Uribia	8.9%	69.5%	9.9%	8.7%	3.0%	403
Valle del Cauca	8.0%	83.1%	4.7%	2.7%	1.4%	6241
Valledupar	10.8%	79.4%	4.5%	2.9%	2.4%	3544
Vaupés	0.0%	71.4%	0.0%	14.3%	14.3%	7
Vichada	8.0%	75.7%	6.5%	6.7%	3.0%	460
Villavicencio	8.0%	85.9%	3.7%	1.9%	0.5%	4036
Yopal	4.9%	88.9%	3.4%	2.1%	0.8%	1313
Yumbo	9.0%	83.8%	3.9%	2.6%	0.6%	941
Zipaquirá	7.1%	88.3%	3.0%	1.3%	0.3%	1026
Colombia	8.5%	82.0%	4.9%	2.9%	1.7%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 29.**

El payaso que aparece en el dibujo se mira en un espejo antes de salir a su función.

¿Cómo se ve el payaso en el espejo?

A.

B.

C.

D.

• Estructura

Competencia	Razonamiento y argumentación
Componente	Geométrico - métrico
Afirmación	Conjeturar y verificar los resultados de aplicar transformaciones a figuras en el plano
Nivel de desempeño	Mínimo
Respuesta correcta	D

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	12.6%	28.4%	5.5%	48.5%	5.0%	785
Antioquia	8.3%	26.2%	3.4%	60.7%	1.4%	21531
Apartadó	8.6%	29.2%	3.1%	58.3%	0.9%	1236
Arauca	6.2%	24.5%	2.6%	65.3%	1.4%	2030
Armenia	5.2%	22.3%	2.3%	69.9%	0.3%	2024
Atlántico	9.2%	28.2%	4.1%	54.9%	3.6%	4442
Barrancabermeja	4.9%	25.2%	2.5%	65.9%	1.5%	1778
Barranquilla	5.2%	24.8%	2.0%	67.0%	0.9%	7996
Bello	4.6%	22.3%	1.7%	70.9%	0.5%	3080
Bogotá, D.C.	3.0%	19.4%	1.3%	74.3%	2.0%	52988
Bolívar	13.5%	30.5%	5.3%	47.6%	3.1%	7955
Boyacá	6.5%	25.4%	2.6%	64.8%	0.7%	7149
Bucaramanga	3.1%	19.2%	1.0%	76.1%	0.6%	3980
Buenaventura	8.2%	27.1%	3.4%	58.4%	2.9%	2558
Buga	3.9%	21.6%	2.4%	68.4%	3.6%	864
Caldas	6.2%	26.7%	1.8%	64.6%	0.7%	4335
Cali	4.4%	22.2%	2.0%	69.7%	1.8%	14287
Caquetá	9.4%	26.8%	4.1%	58.2%	1.5%	2298
Cartagena	7.0%	25.4%	3.3%	62.4%	1.8%	8181
Cartago	4.4%	21.2%	2.6%	70.6%	1.3%	798
Casanare	6.7%	26.3%	2.7%	63.3%	1.1%	2150
Cauca	9.8%	26.2%	4.1%	57.4%	2.5%	8897
Cesar	7.7%	26.1%	3.5%	61.1%	1.6%	6127
Chocó	17.0%	28.1%	7.5%	42.8%	4.7%	2815
Chía	2.2%	17.3%	1.8%	78.2%	0.5%	958

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	7.0%	30.9%	3.9%	55.1%	3.1%	1135
Cundinamarca	3.9%	22.7%	1.9%	70.8%	0.8%	11858
Córdoba	11.7%	30.6%	5.1%	50.5%	2.1%	9413
Cúcuta	4.3%	23.4%	2.1%	69.6%	0.6%	5518
Dosquebradas	3.8%	21.6%	1.8%	72.0%	0.7%	1248
Duitama	2.4%	16.5%	1.3%	79.7%	0.1%	1035
Envigado	3.9%	17.7%	1.7%	76.7%	0.0%	1218
Facatativá	3.1%	18.8%	0.7%	77.3%	0.1%	1064
Florencia	6.8%	27.1%	3.1%	62.1%	0.9%	1474
Floridablanca	3.2%	16.9%	1.4%	77.3%	1.1%	1854
Fusagasugá	3.4%	21.8%	1.6%	72.8%	0.4%	1058
Girardot	6.2%	25.1%	2.4%	64.6%	1.7%	777
Girón	3.1%	22.2%	2.5%	71.5%	0.8%	1013
Guainía	0.0%	33.3%	33.3%	33.3%	0.0%	3
Guaviare	9.6%	27.8%	3.5%	56.7%	2.4%	709
Huila	6.4%	26.2%	2.9%	64.0%	0.6%	6415
Ibagué	4.3%	22.8%	2.0%	70.0%	0.8%	3973
Ipiales	4.3%	19.6%	1.6%	73.6%	0.9%	1014
Itagüí	5.5%	22.4%	2.3%	68.3%	1.5%	1364
Jamundí	7.1%	27.2%	2.4%	61.3%	2.0%	871
La Guajira	11.5%	28.6%	5.1%	52.4%	2.5%	2482
Lorica	12.2%	31.4%	5.8%	48.6%	2.0%	1141
Magangué	11.0%	29.9%	4.8%	52.0%	2.3%	1220
Magdalena	13.4%	30.2%	5.8%	46.8%	3.9%	6283
Maicao	13.5%	26.0%	3.9%	51.1%	5.6%	1425
Malambo	6.3%	27.2%	4.1%	59.6%	2.8%	953
Manizales	3.0%	22.3%	1.7%	72.3%	0.7%	2322
Medellín	6.2%	22.7%	2.8%	67.3%	1.0%	16104
Meta	6.7%	25.3%	2.8%	63.0%	2.2%	3977
Montería	7.0%	26.7%	3.4%	61.9%	0.9%	3791
Mosquera	2.8%	19.8%	1.3%	75.6%	0.6%	880
Nariño	7.4%	22.9%	3.3%	63.8%	2.5%	7282
Neiva	5.6%	27.1%	1.9%	64.6%	0.8%	3000
Norte de Santander	6.2%	24.7%	2.5%	65.8%	0.7%	5753
Palmira	3.8%	22.8%	1.5%	71.0%	0.9%	2079
Pasto	4.0%	19.4%	1.1%	74.9%	0.5%	3137
Pereira	3.5%	22.7%	1.7%	71.1%	0.9%	3510
Piedecuesta	3.5%	22.3%	1.8%	71.5%	0.8%	1103
Pitalito	5.7%	24.9%	1.3%	67.6%	0.5%	1277

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	3.8%	21.9%	2.2%	71.3%	0.8%	2102
Putumayo	7.6%	25.5%	3.0%	62.5%	1.3%	3240
Quibdó	9.8%	28.0%	5.9%	53.2%	3.1%	1068
Quindío	6.1%	27.3%	2.3%	63.6%	0.8%	2172
Riohacha	11.2%	24.8%	4.4%	57.7%	2.0%	1684
Rionegro	2.1%	20.4%	0.8%	76.5%	0.1%	838
Risaralda	7.2%	27.2%	2.5%	61.7%	1.4%	2245
Sabaneta	4.3%	20.8%	1.1%	73.6%	0.3%	375
Sahagún	9.4%	29.5%	4.0%	56.0%	1.2%	956
San Andrés	10.4%	25.1%	6.6%	54.0%	4.0%	454
Santa Marta	6.1%	27.4%	2.5%	61.6%	2.3%	4144
Santander	5.2%	22.9%	2.3%	68.8%	0.8%	6470
Sincelejo	6.4%	26.8%	3.8%	61.5%	1.6%	2541
Soacha	3.7%	23.0%	1.8%	71.0%	0.5%	4164
Sogamoso	3.6%	19.2%	0.8%	75.9%	0.5%	1088
Soledad	5.4%	25.2%	2.4%	66.2%	0.8%	3913
Sucre	12.7%	28.9%	5.9%	50.4%	2.1%	5581
Tolima	7.5%	28.0%	3.5%	59.6%	1.4%	7479
Tuluá	4.4%	25.7%	2.1%	66.9%	0.9%	1602
Tumaco	13.7%	28.2%	5.9%	46.5%	5.6%	1891
Tunja	3.4%	19.4%	1.3%	75.5%	0.4%	1342
Turbo	13.7%	29.7%	5.6%	47.4%	3.6%	1484
Uribia	18.6%	29.3%	6.0%	43.9%	2.2%	403
Valle del Cauca	5.7%	26.7%	3.0%	63.3%	1.3%	6241
Valledupar	6.1%	25.7%	2.3%	63.8%	2.1%	3544
Vaupés	14.3%	42.9%	14.3%	14.3%	14.3%	7
Vichada	10.7%	27.8%	5.7%	52.4%	3.5%	460
Villavicencio	3.7%	22.3%	1.6%	71.9%	0.5%	4036
Yopal	4.5%	21.8%	2.4%	70.5%	0.8%	1313
Yumbo	5.1%	23.3%	2.9%	68.1%	0.6%	941
Zipaquirá	2.0%	22.7%	1.4%	73.5%	0.4%	1026
Colombia	6.4%	24.3%	2.8%	64.9%	1.6%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 30.**

En una fábrica hay una máquina que arma 8 sillas en una hora.

¿Cuál de las siguientes tablas muestra el número de sillas que arma la máquina en 1, 2 , 3, 4 , 5 y 6 horas?

A.

Horas de funcionamiento	Sillas
1	8
2	9
3	10
4	11
5	12
6	13

B.

Horas de funcionamiento	Sillas
1	8
2	16
3	24
4	32
5	40
6	48

C.

Horas de funcionamiento	Sillas
1	8
2	10
3	13
4	17
5	22
6	28

D.

Horas de funcionamiento	Sillas
1	8
2	16
3	32
4	64
5	128
6	256

• Estructura

Competencia	Razonamiento y argumentación
Componente	Numérico - variacional
Afirmación	Analizar relaciones de dependencia en diferentes situaciones
Nivel de desempeño	Mínimo
Respuesta correcta	B

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	21.9%	42.9%	12.7%	17.2%	5.2%	785
Antioquia	13.9%	60.7%	9.8%	14.1%	1.5%	21531
Apartadó	18.3%	56.1%	11.4%	12.9%	1.3%	1236
Arauca	12.5%	63.6%	9.2%	13.3%	1.4%	2030
Armenia	14.0%	66.8%	8.8%	9.8%	0.5%	2024
Atlántico	18.3%	52.4%	11.5%	14.1%	3.6%	4442
Barrancabermeja	15.2%	63.8%	9.8%	9.7%	1.3%	1778
Barranquilla	15.7%	62.2%	9.6%	11.6%	1.0%	7996
Bello	11.7%	68.3%	8.6%	10.6%	0.8%	3080
Bogotá, D.C.	9.2%	73.0%	6.7%	9.0%	2.1%	52988
Bolívar	20.3%	45.2%	15.0%	16.5%	3.0%	7955
Boyacá	10.5%	66.4%	9.0%	13.3%	0.8%	7149
Bucaramanga	8.0%	77.5%	6.1%	7.7%	0.7%	3980
Buenaventura	18.7%	56.8%	8.2%	13.6%	2.7%	2558
Buga	13.8%	61.0%	9.8%	11.7%	3.7%	864
Caldas	11.7%	67.2%	8.7%	11.4%	0.9%	4335
Cali	13.4%	65.9%	8.8%	9.9%	2.0%	14287
Caquetá	13.3%	60.4%	10.7%	14.1%	1.6%	2298
Cartagena	17.4%	57.0%	12.0%	11.6%	1.9%	8181
Cartago	10.5%	68.0%	9.1%	10.9%	1.4%	798
Casanare	13.9%	60.9%	9.1%	15.1%	1.0%	2150
Cauca	13.3%	59.6%	9.9%	14.8%	2.4%	8897
Cesar	16.4%	56.7%	10.8%	14.5%	1.7%	6127
Chocó	18.7%	43.1%	14.2%	19.2%	4.8%	2815
Chía	7.3%	79.1%	5.1%	8.1%	0.3%	958

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	15.1%	54.3%	11.0%	15.9%	3.8%	1135
Cundinamarca	9.3%	71.4%	7.3%	11.2%	0.8%	11858
Córdoba	17.8%	49.5%	14.1%	16.5%	2.1%	9413
Cúcuta	11.2%	69.1%	8.4%	10.6%	0.7%	5518
Dosquebradas	10.7%	72.3%	7.8%	8.7%	0.6%	1248
Duitama	6.3%	79.7%	5.1%	8.7%	0.2%	1035
Envigado	7.0%	80.7%	5.2%	6.9%	0.2%	1218
Facatativá	8.2%	74.2%	8.0%	9.2%	0.4%	1064
Florencia	14.1%	61.5%	10.9%	12.2%	1.3%	1474
Floridablanca	8.9%	75.4%	5.8%	8.9%	1.1%	1854
Fusagasugá	11.2%	70.7%	7.8%	9.9%	0.4%	1058
Girardot	15.4%	62.4%	9.8%	11.2%	1.2%	777
Girón	12.1%	72.0%	5.7%	9.5%	0.7%	1013
Guainía	33.3%	33.3%	0.0%	33.3%	0.0%	3
Guaviare	14.4%	57.7%	8.5%	16.2%	3.2%	709
Huila	12.8%	64.6%	9.2%	12.6%	0.7%	6415
Ibagué	10.3%	71.7%	8.2%	9.1%	0.7%	3973
Ipiales	8.7%	74.1%	6.7%	9.7%	0.9%	1014
Itagüí	11.2%	67.6%	10.3%	9.5%	1.5%	1364
Jamundí	15.5%	60.0%	9.0%	13.2%	2.3%	871
La Guajira	17.1%	52.0%	12.6%	15.8%	2.5%	2482
Lorica	19.0%	48.5%	15.1%	15.3%	2.1%	1141
Magangué	20.5%	52.5%	10.9%	13.4%	2.7%	1220
Magdalena	19.5%	47.1%	13.1%	16.1%	4.2%	6283
Maicao	19.1%	48.6%	11.2%	15.1%	6.0%	1425
Malambo	16.2%	56.7%	11.3%	13.1%	2.7%	953
Manizales	11.0%	73.4%	5.7%	9.3%	0.6%	2322
Medellín	13.2%	63.6%	10.8%	11.2%	1.1%	16104
Meta	13.1%	61.3%	9.9%	13.6%	2.1%	3977
Montería	16.3%	55.9%	11.8%	14.7%	1.4%	3791
Mosquera	9.1%	74.3%	6.9%	8.9%	0.8%	880
Nariño	10.7%	66.6%	8.1%	12.1%	2.4%	7282
Neiva	13.6%	65.7%	9.5%	10.1%	1.2%	3000
Norte de Santander	12.0%	66.9%	8.5%	11.9%	0.8%	5753
Palmira	11.5%	69.8%	7.3%	10.1%	1.3%	2079
Pasto	9.3%	73.7%	7.5%	8.9%	0.6%	3137
Pereira	12.3%	69.3%	7.2%	10.1%	1.1%	3510
Piedecuesta	11.2%	68.8%	9.1%	10.2%	0.6%	1103
Pitalito	10.8%	66.6%	9.9%	12.2%	0.5%	1277

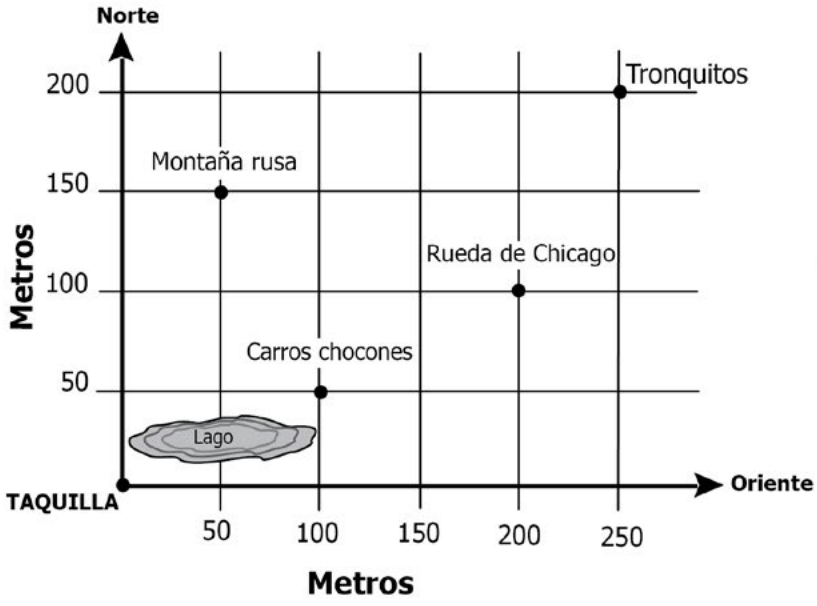
Continúa en la siguiente página

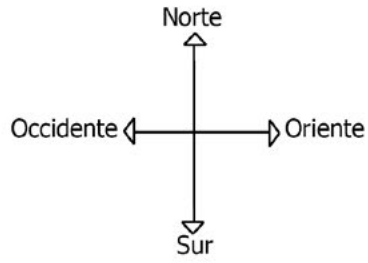
ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	8.7%	74.1%	6.6%	9.4%	1.2%	2102
Putumayo	12.1%	62.0%	10.4%	14.0%	1.5%	3240
Quibdó	19.3%	47.8%	13.1%	16.0%	3.8%	1068
Quindío	12.5%	63.7%	10.0%	12.8%	1.0%	2172
Riohacha	18.7%	52.4%	11.2%	15.7%	2.0%	1684
Rionegro	9.9%	75.5%	5.1%	8.8%	0.6%	838
Risaralda	13.8%	62.2%	10.0%	12.9%	1.1%	2245
Sabaneta	8.0%	73.9%	7.5%	10.4%	0.3%	375
Sahagún	16.6%	54.0%	12.3%	15.8%	1.3%	956
San Andrés	17.4%	45.8%	17.4%	16.1%	3.3%	454
Santa Marta	17.0%	58.7%	9.4%	12.4%	2.6%	4144
Santander	10.1%	70.3%	7.5%	11.3%	0.8%	6470
Sincelejo	16.5%	58.8%	11.2%	12.0%	1.5%	2541
Soacha	11.2%	70.9%	7.5%	9.8%	0.6%	4164
Sogamoso	7.5%	79.1%	4.3%	8.5%	0.6%	1088
Soledad	14.9%	63.3%	9.2%	11.8%	0.8%	3913
Sucre	18.3%	48.5%	13.8%	17.3%	2.2%	5581
Tolima	13.2%	62.2%	10.2%	12.9%	1.5%	7479
Tuluá	11.4%	67.8%	9.5%	10.5%	0.9%	1602
Tumaco	17.9%	47.4%	12.4%	17.4%	4.9%	1891
Tunja	7.0%	77.0%	7.9%	7.9%	0.2%	1342
Turbo	22.2%	42.7%	14.8%	16.2%	4.0%	1484
Uribia	19.9%	39.5%	17.9%	20.6%	2.2%	403
Valle del Cauca	14.4%	62.3%	10.1%	11.8%	1.4%	6241
Valledupar	16.8%	56.3%	10.3%	14.6%	2.1%	3544
Vaupés	28.6%	14.3%	14.3%	28.6%	14.3%	7
Vichada	12.2%	57.0%	11.7%	15.0%	4.1%	460
Villavicencio	10.2%	71.8%	7.9%	9.5%	0.7%	4036
Yopal	12.2%	69.4%	7.5%	9.7%	1.1%	1313
Yumbo	13.8%	63.8%	9.0%	12.2%	1.2%	941
Zipaquirá	9.4%	73.9%	7.3%	8.8%	0.7%	1026
Colombia	13.1%	63.8%	9.4%	12.0%	1.7%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 31.**

La siguiente gráfica muestra la ubicación de diferentes atracciones de un parque de diversiones.





Manuela está en la taquilla. Para llegar a los carros chocones ella debe caminar

A. 50 metros al oriente y 150 metros al norte.
B. 100 metros al oriente y 50 metros al norte.
C. 200 metros al oriente y 100 metros al norte.
D. 250 metros al oriente y 200 metros al norte.

• Estructura

Competencia	Comunicación, representación y modelación
Componente	Geométrico - métrico
Afirmación	Utilizar sistemas de coordenadas para ubicar figuras planas u objetos y describir su localización.
Nivel de desempeño	Mínimo
Respuesta correcta	B

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	20.4%	48.4%	14.6%	12.4%	4.2%	785
Antioquia	21.5%	56.5%	11.7%	8.5%	1.7%	21531
Apartadó	23.5%	52.2%	13.8%	9.0%	1.5%	1236
Arauca	20.0%	57.0%	13.3%	8.2%	1.5%	2030
Armenia	19.4%	62.3%	11.8%	5.8%	0.7%	2024
Atlántico	23.4%	47.4%	14.1%	11.4%	3.8%	4442
Barrancabermeja	21.5%	58.5%	10.6%	8.0%	1.5%	1778
Barranquilla	23.5%	57.7%	10.7%	6.8%	1.3%	7996
Bello	19.6%	65.0%	9.8%	4.8%	0.8%	3080
Bogotá, D.C.	16.9%	68.9%	8.0%	4.1%	2.2%	52988
Bolívar	23.3%	41.9%	17.4%	14.0%	3.4%	7955
Boyacá	19.1%	61.9%	11.2%	6.9%	0.9%	7149
Bucaramanga	17.1%	70.5%	7.7%	3.9%	0.8%	3980
Buenaventura	20.9%	50.4%	13.4%	12.2%	3.1%	2558
Buga	20.5%	60.9%	10.0%	5.1%	3.6%	864
Caldas	20.6%	61.1%	10.2%	7.1%	1.0%	4335
Cali	19.8%	63.2%	9.7%	5.2%	2.2%	14287
Caquetá	21.5%	54.5%	11.6%	10.7%	1.8%	2298
Cartagena	22.7%	52.4%	12.9%	9.6%	2.4%	8181
Cartago	20.1%	61.4%	10.8%	5.9%	1.9%	798
Casanare	19.4%	60.8%	11.1%	7.1%	1.5%	2150
Cauca	19.7%	55.0%	11.2%	11.2%	2.9%	8897
Cesar	22.4%	52.3%	12.4%	11.0%	1.9%	6127
Chocó	20.7%	37.0%	18.0%	18.8%	5.5%	2815
Chía	17.3%	71.3%	7.0%	3.8%	0.6%	958

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	22.7%	49.3%	13.1%	10.6%	4.2%	1135
Cundinamarca	18.4%	65.8%	9.4%	5.4%	1.0%	11858
Córdoba	23.4%	45.9%	15.0%	13.2%	2.5%	9413
Cúcuta	20.0%	62.1%	10.3%	6.9%	0.8%	5518
Dosquebradas	19.9%	66.6%	8.6%	4.3%	0.6%	1248
Duitama	12.4%	77.9%	6.8%	2.9%	0.1%	1035
Envigado	14.8%	74.3%	7.0%	3.4%	0.6%	1218
Facatativá	17.8%	69.5%	8.2%	3.9%	0.6%	1064
Florencia	19.4%	58.6%	11.9%	8.7%	1.4%	1474
Floridablanca	16.7%	69.0%	9.0%	4.1%	1.2%	1854
Fusagasugá	18.4%	67.2%	9.6%	4.3%	0.4%	1058
Girardot	23.3%	58.9%	10.9%	5.0%	1.8%	777
Girón	18.4%	65.4%	10.4%	4.9%	0.9%	1013
Guainía	66.7%	0.0%	0.0%	33.3%	0.0%	3
Guaviare	21.6%	53.9%	13.1%	7.6%	3.8%	709
Huila	21.0%	58.6%	11.9%	7.7%	0.8%	6415
Ibagué	19.6%	64.6%	9.8%	5.0%	1.0%	3973
Ipiales	19.4%	64.7%	9.2%	5.4%	1.3%	1014
Itagüí	18.5%	64.1%	10.8%	5.1%	1.5%	1364
Jamundí	21.9%	59.2%	10.9%	5.7%	2.2%	871
La Guajira	22.7%	49.0%	14.1%	11.3%	2.9%	2482
Lorica	22.1%	44.2%	18.1%	13.1%	2.5%	1141
Magangué	25.7%	46.2%	14.7%	10.4%	3.0%	1220
Magdalena	24.0%	42.6%	15.3%	13.9%	4.3%	6283
Maicao	21.2%	43.4%	16.0%	13.4%	6.0%	1425
Malambo	22.1%	54.8%	10.5%	9.5%	3.0%	953
Manizales	20.2%	64.8%	8.8%	5.5%	0.7%	2322
Medellín	22.0%	58.5%	12.3%	5.9%	1.3%	16104
Meta	19.9%	57.9%	12.1%	7.6%	2.4%	3977
Montería	22.2%	53.2%	13.1%	9.9%	1.7%	3791
Mosquera	14.9%	72.2%	8.2%	4.1%	0.7%	880
Nariño	18.7%	59.3%	10.1%	9.2%	2.7%	7282
Neiva	20.0%	62.3%	10.8%	5.7%	1.1%	3000
Norte de Santander	20.9%	60.8%	10.2%	7.1%	1.0%	5753
Palmira	21.0%	64.3%	8.9%	4.5%	1.4%	2079
Pasto	18.8%	66.2%	9.6%	4.7%	0.7%	3137
Pereira	18.8%	66.5%	9.1%	4.5%	1.2%	3510
Piedecuesta	20.7%	65.2%	8.2%	5.3%	0.7%	1103
Pitalito	22.2%	58.3%	10.5%	8.2%	0.7%	1277

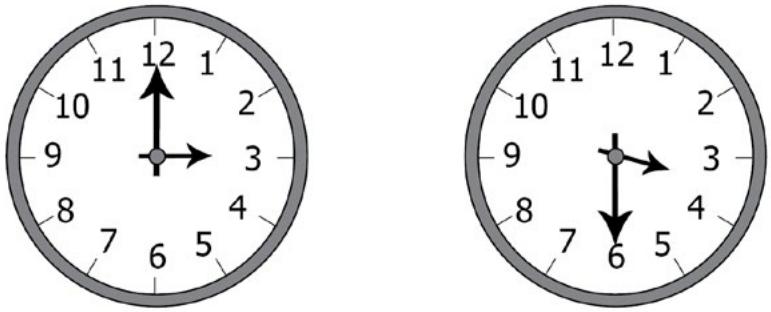
Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	18.5%	67.2%	8.0%	5.1%	1.1%	2102
Putumayo	20.0%	59.3%	11.5%	7.6%	1.6%	3240
Quibdó	22.1%	44.1%	15.4%	14.9%	3.5%	1068
Quindío	21.4%	57.0%	12.8%	7.3%	1.5%	2172
Riohacha	22.9%	49.4%	14.4%	11.3%	2.0%	1684
Rionegro	16.0%	70.8%	8.1%	4.8%	0.4%	838
Risaralda	22.6%	57.4%	11.4%	7.2%	1.4%	2245
Sabaneta	19.5%	68.3%	5.9%	6.1%	0.3%	375
Sahagún	26.8%	45.9%	14.2%	11.6%	1.5%	956
San Andrés	24.9%	42.3%	15.9%	13.2%	3.7%	454
Santa Marta	23.0%	53.9%	12.4%	8.3%	2.4%	4144
Santander	18.9%	64.1%	10.0%	6.2%	0.9%	6470
Sincelejo	23.3%	53.8%	12.9%	8.5%	1.5%	2541
Soacha	19.5%	65.8%	9.2%	4.9%	0.6%	4164
Sogamoso	17.7%	72.1%	6.9%	2.8%	0.6%	1088
Soledad	22.4%	58.6%	10.8%	7.1%	1.2%	3913
Sucre	23.3%	45.2%	15.4%	13.4%	2.7%	5581
Tolima	21.3%	56.2%	12.4%	8.6%	1.5%	7479
Tuluá	20.8%	63.4%	9.2%	5.0%	1.6%	1602
Tumaco	22.5%	41.5%	14.3%	15.7%	6.1%	1891
Tunja	16.0%	70.4%	9.5%	3.7%	0.4%	1342
Turbo	22.8%	41.3%	16.3%	14.6%	4.9%	1484
Uribia	22.3%	36.0%	20.1%	19.4%	2.2%	403
Valle del Cauca	22.3%	57.4%	11.2%	7.3%	1.7%	6241
Valledupar	23.4%	54.2%	11.0%	8.6%	2.8%	3544
Vaupés	28.6%	28.6%	0.0%	28.6%	14.3%	7
Vichada	16.1%	53.0%	10.0%	16.1%	4.8%	460
Villavicencio	19.3%	67.0%	8.3%	4.6%	0.7%	4036
Yopal	17.9%	67.1%	8.5%	5.4%	1.1%	1313
Yumbo	20.5%	61.0%	10.7%	6.5%	1.3%	941
Zipaquirá	16.0%	71.0%	9.6%	3.0%	0.5%	1026
Colombia	20.3%	59.2%	11.1%	7.5%	1.9%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

• Pregunta 32.

Los relojes muestran las horas de iniciación y terminación del recreo en un colegio.



El recreo se inició a las 3:00 p.m.

El recreo finalizó a las 3:30 p.m. ¿Cuánto avanzó el minutero desde que se inició el recreo?

A. Un cuarto de vuelta.
B. Media vuelta.
C. Tres cuartos de vuelta.
D. Una vuelta.

• Estructura

Competencia	Comunicación, representación y modelación
Componente	Numérico - variacional
Afirmación	Traducir relaciones numéricas expresadas gráfica y simbólicamente.
Nivel de desempeño	Satisfactorio
Respuesta correcta	B

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	13.9%	42.7%	22.7%	15.9%	4.8%	785
Antioquia	12.6%	57.5%	15.2%	13.0%	1.7%	21531
Apartadó	12.4%	50.3%	21.1%	15.0%	1.2%	1236
Arauca	14.4%	54.0%	17.9%	12.2%	1.4%	2030
Armenia	14.4%	60.5%	15.0%	9.6%	0.5%	2024
Atlántico	11.2%	50.4%	19.3%	15.1%	4.0%	4442
Barrancabermeja	13.4%	58.0%	14.1%	12.5%	1.9%	1778
Barranquilla	11.6%	58.4%	16.4%	12.6%	1.1%	7996
Bello	13.0%	62.9%	14.1%	9.3%	0.7%	3080
Bogotá, D.C.	14.0%	61.1%	14.1%	8.6%	2.2%	52988
Bolívar	12.4%	42.4%	21.9%	19.6%	3.7%	7955
Boyacá	14.4%	57.6%	15.0%	12.1%	0.8%	7149
Bucaramanga	12.2%	67.0%	12.7%	7.2%	0.8%	3980
Buenaventura	11.9%	52.5%	18.0%	14.3%	3.2%	2558
Buga	12.2%	59.6%	14.7%	9.8%	3.7%	864
Caldas	11.8%	62.1%	14.5%	10.7%	1.0%	4335
Cali	12.1%	61.6%	15.1%	9.1%	2.1%	14287
Caquetá	10.9%	54.8%	18.3%	14.2%	1.9%	2298
Cartagena	11.7%	54.1%	18.2%	13.9%	2.1%	8181
Cartago	12.9%	58.5%	15.2%	12.0%	1.4%	798
Casanare	14.2%	52.0%	17.5%	14.8%	1.5%	2150
Cauca	12.3%	52.8%	17.5%	14.9%	2.5%	8897
Cesar	13.1%	53.3%	16.6%	15.2%	1.8%	6127
Chocó	12.6%	41.3%	21.8%	19.3%	4.9%	2815
Chía	13.2%	65.9%	13.4%	7.1%	0.5%	958
Ciénaga	11.0%	53.0%	18.2%	14.0%	3.7%	1135
Cundinamarca	13.4%	60.1%	14.5%	11.0%	1.0%	11858
Córdoba	12.4%	47.4%	20.0%	18.0%	2.3%	9413
Cúcuta	14.4%	57.4%	16.3%	11.1%	0.7%	5518
Dosquebradas	13.5%	60.4%	14.5%	10.7%	0.9%	1248
Duitama	14.8%	68.8%	11.4%	4.6%	0.4%	1035
Envigado	11.1%	70.0%	11.1%	7.6%	0.3%	1218
Facatativá	15.9%	63.3%	11.7%	9.0%	0.1%	1064
Florencia	14.1%	51.4%	18.2%	15.1%	1.2%	1474
Floridablanca	11.4%	68.3%	12.7%	6.4%	1.2%	1854
Fusagasugá	12.8%	61.3%	15.8%	9.4%	0.8%	1058
Girardot	12.9%	55.0%	17.5%	12.9%	1.8%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	13.8%	63.7%	12.4%	9.2%	0.9%	1013
Guainía	33.3%	33.3%	0.0%	33.3%	0.0%	3
Guaviare	14.8%	50.8%	17.2%	13.7%	3.5%	709
Huila	12.1%	58.2%	15.7%	13.2%	0.8%	6415
Ibagué	13.2%	62.3%	14.5%	9.1%	0.8%	3973
Ipiales	13.5%	62.0%	14.2%	9.3%	1.0%	1014
Itagüí	14.3%	61.1%	13.8%	9.5%	1.3%	1364
Jamundí	13.7%	53.5%	17.5%	13.2%	2.2%	871
La Guajira	13.2%	47.5%	22.1%	14.7%	2.5%	2482
Lorica	13.3%	45.2%	20.8%	18.2%	2.5%	1141
Magangué	14.6%	43.8%	21.1%	17.9%	2.7%	1220
Magdalena	12.4%	44.3%	19.8%	18.9%	4.5%	6283
Maicao	11.4%	46.5%	19.7%	16.8%	5.5%	1425
Malambo	13.1%	56.6%	14.8%	12.6%	2.9%	953
Manizales	12.0%	65.1%	13.6%	8.7%	0.7%	2322
Medellín	13.6%	59.6%	15.5%	10.2%	1.0%	16104
Meta	14.1%	53.8%	17.0%	12.7%	2.4%	3977
Montería	12.1%	51.1%	18.9%	16.3%	1.6%	3791
Mosquera	12.5%	64.9%	14.2%	7.7%	0.7%	880
Nariño	11.6%	56.6%	16.1%	12.9%	2.6%	7282
Neiva	15.2%	57.2%	15.0%	11.6%	0.9%	3000
Norte de Santander	12.5%	60.9%	14.3%	11.4%	1.0%	5753
Palmira	11.3%	64.4%	14.4%	8.8%	1.1%	2079
Pasto	13.1%	60.5%	16.5%	9.5%	0.4%	3137
Pereira	13.1%	62.8%	13.7%	9.0%	1.4%	3510
Piedecuesta	12.6%	63.1%	14.4%	9.2%	0.6%	1103
Pitalito	12.8%	57.5%	16.4%	12.4%	0.9%	1277
Popayán	12.8%	61.7%	14.0%	10.2%	1.3%	2102
Putumayo	11.5%	53.8%	19.0%	14.2%	1.5%	3240
Quibdó	13.4%	47.8%	22.8%	12.5%	3.4%	1068
Quindío	13.6%	55.8%	16.6%	12.8%	1.2%	2172
Riohacha	11.0%	49.7%	20.3%	16.6%	2.4%	1684
Rionegro	14.3%	64.6%	12.9%	8.0%	0.2%	838
Risaralda	12.2%	56.8%	16.4%	13.1%	1.4%	2245
Sabaneta	16.8%	64.5%	12.3%	5.9%	0.5%	375
Sahagún	11.0%	48.6%	18.9%	20.1%	1.4%	956
San Andrés	13.0%	45.8%	23.3%	14.1%	3.7%	454
Santa Marta	11.8%	54.2%	17.8%	13.7%	2.5%	4144
Santander	11.9%	62.1%	14.2%	10.8%	1.0%	6470

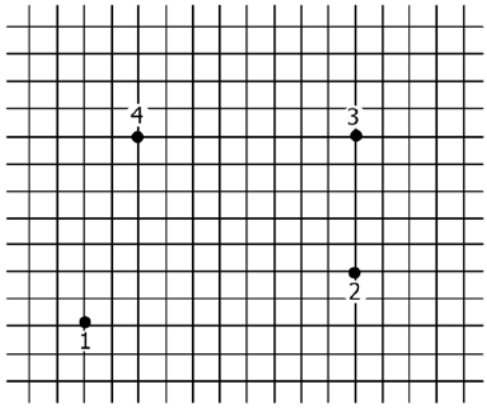
Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	12.2%	53.9%	17.0%	15.4%	1.5%	2541
Soacha	14.0%	61.0%	14.8%	9.4%	0.9%	4164
Sogamoso	14.5%	64.2%	13.0%	8.0%	0.4%	1088
Soledad	10.9%	59.4%	16.5%	12.2%	1.1%	3913
Sucre	12.0%	45.9%	20.8%	18.6%	2.7%	5581
Tolima	13.2%	55.3%	17.1%	13.0%	1.4%	7479
Tuluá	12.9%	61.4%	15.1%	9.5%	1.1%	1602
Tumaco	13.9%	43.1%	20.3%	17.1%	5.6%	1891
Tunja	16.1%	64.1%	12.4%	6.9%	0.5%	1342
Turbo	13.7%	41.9%	22.0%	18.4%	4.0%	1484
Uribia	15.9%	41.4%	24.3%	16.1%	2.2%	403
Valle del Cauca	12.2%	59.7%	15.3%	11.2%	1.6%	6241
Valledupar	12.6%	54.0%	17.6%	13.5%	2.3%	3544
Vaupés	42.9%	14.3%	14.3%	14.3%	14.3%	7
Vichada	14.6%	48.9%	19.6%	12.8%	4.1%	460
Villavicencio	14.4%	60.7%	14.6%	9.8%	0.6%	4036
Yopal	16.4%	56.9%	14.8%	10.8%	1.1%	1313
Yumbo	11.8%	60.3%	15.9%	11.1%	1.0%	941
Zipaquirá	14.1%	62.3%	13.6%	9.2%	0.8%	1026
Colombia	12.9%	57.0%	16.1%	12.1%	1.8%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

• Pregunta 33.

David debe unir tres de los puntos que se muestran en la siguiente cuadrícula, para dibujar un triángulo que tenga un ángulo recto.



¿Cuáles son los puntos que debe unir David?

A. 1, 2 y 3.
B. 1, 2 y 4.
C. 2, 3 y 4.
D. 1, 3 y 4.

• Estructura

Competencia	Razonamiento y argumentación
Componente	Geométrico - métrico
Afirmación	Construir y clasificar figuras planas y sólidos, a partir del reconocimiento de relqciones de paralelismo y perpendicularidad entre sus lados o caras.
Nivel de desempeño	Avanzado
Respuesta correcta	C

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	21.7%	26.2%	32.7%	14.1%	5.2%	785
Antioquia	18.9%	23.3%	43.5%	12.3%	2.0%	21531
Apartadó	20.1%	23.6%	41.6%	13.3%	1.5%	1236
Arauca	16.6%	26.2%	43.5%	11.9%	1.8%	2030
Armenia	16.5%	25.2%	44.7%	12.5%	1.1%	2024
Atlántico	18.7%	25.3%	40.0%	12.0%	4.0%	4442
Barrancabermeja	16.9%	25.9%	42.2%	12.9%	2.1%	1778
Barranquilla	18.6%	25.8%	42.1%	12.2%	1.2%	7996
Bello	17.4%	27.1%	41.7%	12.8%	1.0%	3080
Bogotá, D.C.	13.9%	26.6%	44.9%	12.2%	2.3%	52988
Bolívar	21.7%	22.6%	38.6%	12.8%	4.3%	7955
Boyacá	16.0%	22.4%	48.7%	11.8%	1.1%	7149
Bucaramanga	12.5%	24.3%	49.5%	12.5%	1.1%	3980
Buenaventura	19.8%	21.0%	45.5%	10.2%	3.5%	2558
Buga	17.0%	24.7%	44.3%	10.1%	3.9%	864
Caldas	15.2%	25.9%	45.3%	12.5%	1.1%	4335
Cali	15.7%	26.6%	43.8%	11.6%	2.3%	14287
Caquetá	17.4%	22.7%	45.4%	12.8%	1.7%	2298
Cartagena	19.1%	23.2%	43.6%	11.4%	2.6%	8181
Cartago	15.2%	28.4%	43.0%	12.0%	1.4%	798
Casanare	16.8%	28.0%	40.4%	13.6%	1.3%	2150
Cauca	17.0%	21.4%	47.2%	11.4%	3.0%	8897
Cesar	19.5%	22.9%	44.2%	11.5%	1.9%	6127
Chocó	20.1%	19.5%	42.1%	12.1%	6.1%	2815
Chía	13.5%	24.5%	48.1%	13.5%	0.4%	958
Ciénaga	18.2%	25.1%	43.0%	9.8%	3.9%	1135
Cundinamarca	14.2%	25.3%	47.3%	12.0%	1.1%	11858
Córdoba	20.3%	24.0%	40.8%	12.3%	2.6%	9413
Cúcuta	17.2%	26.6%	43.6%	11.5%	1.1%	5518
Dosquebradas	16.5%	24.8%	45.2%	12.3%	1.2%	1248
Duitama	10.7%	21.3%	58.4%	9.1%	0.6%	1035
Envigado	15.4%	24.6%	47.7%	11.8%	0.5%	1218
Facatativá	14.9%	26.6%	44.4%	13.4%	0.7%	1064
Florencia	18.8%	25.2%	40.4%	13.8%	1.7%	1474
Floridablanca	11.9%	22.8%	50.7%	13.2%	1.4%	1854
Fusagasugá	16.2%	26.6%	42.7%	13.7%	0.9%	1058
Girardot	17.5%	27.0%	42.6%	10.7%	2.2%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	16.3%	25.5%	43.8%	13.3%	1.1%	1013
Guainía	33.3%	0.0%	66.7%	0.0%	0.0%	3
Guaviare	18.6%	22.3%	40.8%	14.7%	3.7%	709
Huila	17.6%	23.9%	45.6%	11.8%	1.1%	6415
Ibagué	14.7%	26.6%	45.8%	12.1%	0.8%	3973
Ipiales	15.6%	25.1%	46.7%	11.1%	1.4%	1014
Itagüí	18.2%	24.9%	41.9%	13.4%	1.6%	1364
Jamundí	18.6%	27.2%	38.6%	13.4%	2.2%	871
La Guajira	17.7%	24.9%	42.5%	11.9%	3.0%	2482
Lorica	20.6%	24.5%	40.2%	12.2%	2.5%	1141
Magangué	22.5%	24.8%	37.5%	12.0%	3.2%	1220
Magdalena	22.3%	22.2%	38.5%	12.5%	4.5%	6283
Maicao	18.6%	24.3%	39.0%	12.1%	6.0%	1425
Malambo	17.2%	21.8%	46.7%	11.6%	2.6%	953
Manizales	14.6%	28.9%	43.8%	11.8%	0.7%	2322
Medellín	18.7%	25.7%	40.7%	13.5%	1.4%	16104
Meta	16.4%	25.8%	43.3%	11.8%	2.7%	3977
Montería	18.6%	27.7%	40.5%	11.5%	1.7%	3791
Mosquera	14.9%	26.7%	45.3%	12.0%	1.0%	880
Nariño	16.0%	20.7%	49.2%	11.1%	2.9%	7282
Neiva	17.9%	26.4%	42.6%	12.0%	1.2%	3000
Norte de Santander	17.2%	25.6%	45.3%	11.0%	0.9%	5753
Palmira	15.1%	25.7%	45.7%	11.9%	1.6%	2079
Pasto	14.8%	23.2%	48.9%	12.2%	0.8%	3137
Pereira	15.4%	25.6%	45.8%	11.9%	1.4%	3510
Piedecuesta	14.6%	27.4%	44.1%	13.1%	0.8%	1103
Pitalito	14.4%	25.9%	45.8%	12.9%	0.9%	1277
Popayán	13.9%	26.3%	45.6%	12.5%	1.7%	2102
Putumayo	18.8%	22.3%	45.7%	11.7%	1.6%	3240
Quibdó	19.9%	24.6%	38.1%	12.9%	4.4%	1068
Quindío	19.3%	25.4%	41.6%	12.0%	1.7%	2172
Riohacha	19.7%	25.2%	39.0%	12.5%	3.7%	1684
Rionegro	17.1%	25.9%	41.6%	15.0%	0.4%	838
Risaralda	19.4%	23.6%	42.9%	12.6%	1.6%	2245
Sabaneta	17.9%	26.7%	41.6%	12.8%	1.1%	375
Sahagún	19.6%	25.6%	40.3%	13.3%	1.3%	956
San Andrés	15.4%	30.8%	33.9%	15.0%	4.8%	454
Santa Marta	19.5%	25.9%	39.4%	12.6%	2.6%	4144
Santander	14.3%	23.3%	50.2%	11.0%	1.2%	6470

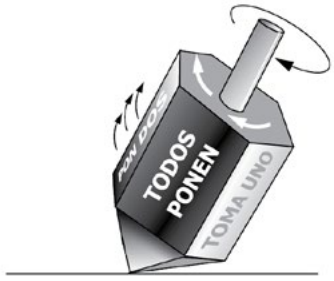
Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	18.3%	26.1%	41.0%	13.0%	1.5%	2541
Soacha	15.2%	27.0%	43.8%	13.2%	0.8%	4164
Sogamoso	14.5%	25.3%	47.2%	12.4%	0.6%	1088
Soledad	18.1%	27.2%	41.7%	11.9%	1.0%	3913
Sucre	21.3%	23.6%	40.0%	12.1%	3.0%	5581
Tolima	18.1%	25.3%	43.1%	11.8%	1.8%	7479
Tuluá	14.0%	28.5%	43.9%	11.8%	1.8%	1602
Tumaco	19.4%	22.9%	40.7%	9.7%	7.3%	1891
Tunja	12.1%	23.8%	49.9%	13.5%	0.7%	1342
Turbo	24.1%	21.6%	36.8%	13.1%	4.3%	1484
Uribia	17.4%	27.8%	40.9%	11.2%	2.7%	403
Valle del Cauca	17.9%	25.6%	42.3%	12.4%	1.8%	6241
Valledupar	18.8%	24.5%	42.3%	11.9%	2.5%	3544
Vaupés	0.0%	28.6%	57.1%	0.0%	14.3%	7
Vichada	17.8%	22.6%	40.9%	14.3%	4.3%	460
Villavicencio	14.9%	26.1%	46.1%	12.2%	0.8%	4036
Yopal	13.9%	28.6%	42.3%	14.0%	1.2%	1313
Yumbo	15.8%	28.5%	41.6%	12.8%	1.4%	941
Zipaquirá	15.7%	26.0%	46.7%	11.1%	0.5%	1026
Colombia	17.0%	24.9%	43.8%	12.2%	2.1%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

- **Pregunta 34.**

Juan juega con una perinola de seis caras iguales como la que se observa a continuación:



Cada cara está marcada con una de las siguientes frases : **"TODOS PONEN", "TOMA UNO", "TOMA DOS", "TOMA TODO", "PON UNO", "PON DOS".**

¿Cuál es la probabilidad de que al hacer girar la perinola, salga en la cara de arriba **"TODOS PONEN"**?

A. $\frac{1}{5}$

B. $\frac{1}{6}$

C. $\frac{1}{3}$

D. $\frac{2}{3}$

- **Estructura**

Competencia	Planteamiento y resolución de problemas
Componente	Aleatorio
Afirmación	Resolver situaciones que requieren calcular la probabilidad de eventos aleatorios sencillos.
Nivel de desempeño	Avanzado
Respuesta correcta	B

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	19.2%	39.7%	19.1%	16.2%	5.7%	785
Antioquia	22.0%	44.1%	15.8%	15.6%	2.5%	21531
Apartadó	21.1%	43.6%	17.2%	15.8%	2.3%	1236
Arauca	20.4%	46.1%	17.5%	13.3%	2.6%	2030
Armenia	21.2%	46.7%	16.0%	14.6%	1.4%	2024
Atlántico	19.7%	43.3%	15.4%	16.5%	5.1%	4442
Barrancabermeja	21.9%	44.9%	15.4%	15.5%	2.3%	1778
Barranquilla	21.5%	46.1%	16.1%	13.9%	2.4%	7996
Bello	22.8%	45.0%	16.8%	13.6%	1.8%	3080
Bogotá, D.C.	20.6%	48.0%	15.8%	12.6%	2.9%	52988
Bolívar	20.7%	39.2%	16.6%	19.2%	4.2%	7955
Boyacá	21.5%	44.7%	17.0%	14.9%	1.8%	7149
Bucaramanga	20.2%	52.6%	14.8%	11.0%	1.4%	3980
Buenaventura	20.4%	44.6%	14.6%	16.9%	3.4%	2558
Buga	18.2%	48.7%	15.9%	13.1%	4.2%	864
Caldas	21.5%	46.2%	16.3%	14.4%	1.6%	4335
Cali	21.4%	48.3%	14.7%	12.6%	3.1%	14287
Caquetá	20.5%	47.3%	16.4%	13.6%	2.3%	2298
Cartagena	21.1%	45.9%	14.9%	14.9%	3.2%	8181
Cartago	25.6%	45.6%	14.5%	12.2%	2.1%	798
Casanare	22.7%	43.7%	16.5%	15.0%	2.1%	2150
Cauca	19.5%	48.8%	14.5%	13.8%	3.5%	8897
Cesar	19.9%	45.7%	16.1%	15.7%	2.6%	6127
Chocó	19.1%	40.9%	15.7%	18.3%	6.0%	2815
Chía	21.7%	48.9%	14.1%	14.2%	1.1%	958
Ciénaga	18.8%	46.2%	16.5%	13.7%	4.8%	1135
Cundinamarca	20.1%	48.3%	16.1%	13.7%	1.7%	11858
Córdoba	20.3%	41.1%	17.1%	18.5%	3.0%	9413
Cúcuta	19.9%	49.6%	15.7%	13.4%	1.4%	5518
Dosquebradas	21.0%	45.0%	18.7%	13.7%	1.7%	1248
Duitama	20.4%	55.3%	14.2%	8.8%	1.4%	1035
Envigado	18.5%	54.3%	15.3%	11.2%	0.7%	1218
Facatativá	20.2%	49.5%	18.1%	11.2%	0.9%	1064
Florencia	22.9%	42.5%	17.4%	14.6%	2.5%	1474
Floridablanca	20.3%	52.4%	14.0%	11.3%	1.9%	1854
Fusagasugá	20.9%	48.1%	15.6%	13.3%	2.1%	1058
Girardot	19.8%	49.5%	14.8%	13.9%	1.9%	777

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Girón	22.4%	45.6%	16.2%	13.8%	2.0%	1013
Guainía	33.3%	66.7%	0.0%	0.0%	0.0%	3
Guaviare	19.2%	41.3%	18.2%	16.9%	4.4%	709
Huila	20.7%	48.8%	16.0%	12.7%	1.8%	6415
Ibagué	20.3%	49.7%	15.3%	13.6%	1.2%	3973
Ipiales	19.6%	48.8%	15.9%	13.8%	1.9%	1014
Itagüí	24.6%	40.2%	19.0%	13.8%	2.4%	1364
Jamundí	24.6%	42.1%	16.3%	14.0%	3.0%	871
La Guajira	19.5%	43.6%	15.4%	18.0%	3.5%	2482
Lorica	21.8%	38.8%	16.0%	19.2%	4.2%	1141
Magangué	24.4%	36.8%	17.2%	18.2%	3.4%	1220
Magdalena	20.1%	40.8%	15.8%	17.7%	5.6%	6283
Maicao	22.7%	39.4%	15.2%	16.0%	6.6%	1425
Malambo	18.5%	46.0%	16.6%	15.2%	3.8%	953
Manizales	21.0%	46.1%	17.4%	14.1%	1.4%	2322
Medellín	23.4%	42.0%	16.9%	15.8%	2.0%	16104
Meta	21.2%	44.0%	16.0%	15.3%	3.5%	3977
Montería	21.0%	43.3%	17.5%	16.1%	2.2%	3791
Mosquera	20.9%	47.4%	16.7%	13.5%	1.5%	880
Nariño	17.4%	52.0%	14.6%	12.6%	3.4%	7282
Neiva	21.4%	48.5%	14.6%	13.9%	1.7%	3000
Norte de Santander	21.3%	47.1%	16.5%	13.8%	1.4%	5753
Palmira	21.2%	50.5%	14.2%	12.2%	1.9%	2079
Pasto	21.0%	50.7%	15.7%	11.5%	1.0%	3137
Pereira	22.2%	46.2%	15.5%	13.6%	2.5%	3510
Piedecuesta	23.1%	49.3%	15.3%	10.4%	1.8%	1103
Pitalito	22.4%	47.5%	16.0%	12.9%	1.3%	1277
Popayán	20.0%	52.0%	14.1%	12.0%	1.8%	2102
Putumayo	19.7%	46.5%	16.0%	15.2%	2.5%	3240
Quibdó	22.8%	39.1%	17.1%	16.7%	4.2%	1068
Quindío	20.5%	43.9%	17.4%	16.1%	2.1%	2172
Riohacha	19.7%	43.5%	16.6%	16.4%	3.8%	1684
Rionegro	19.7%	50.0%	15.8%	13.7%	0.8%	838
Risaralda	22.3%	43.3%	17.5%	14.2%	2.7%	2245
Sabaneta	22.1%	47.2%	17.9%	11.7%	1.1%	375
Sahagún	20.6%	44.7%	15.9%	16.8%	2.0%	956
San Andrés	23.3%	35.5%	18.5%	18.3%	4.4%	454
Santa Marta	20.7%	45.9%	15.2%	14.9%	3.3%	4144
Santander	21.3%	48.9%	15.2%	12.8%	1.8%	6470

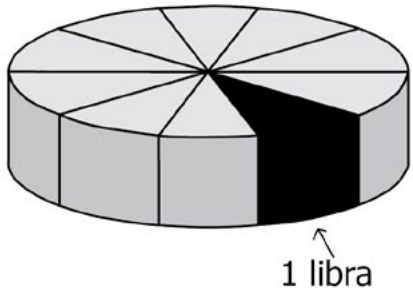
Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Sincelejo	20.9%	45.5%	17.4%	13.7%	2.6%	2541
Soacha	22.5%	48.9%	14.8%	12.4%	1.4%	4164
Sogamoso	20.0%	52.0%	15.2%	11.3%	1.5%	1088
Soledad	20.9%	49.0%	15.8%	12.7%	1.6%	3913
Sucre	20.8%	41.1%	16.7%	18.2%	3.3%	5581
Tolima	20.5%	46.0%	16.6%	14.5%	2.3%	7479
Tuluá	21.5%	46.9%	16.2%	13.2%	2.1%	1602
Tumaco	20.8%	38.2%	15.5%	17.7%	7.8%	1891
Tunja	21.0%	48.7%	16.5%	12.4%	1.4%	1342
Turbo	23.2%	38.1%	16.2%	17.4%	5.1%	1484
Uribia	21.1%	37.7%	16.1%	21.8%	3.2%	403
Valle del Cauca	22.0%	44.6%	17.2%	13.7%	2.6%	6241
Valledupar	21.6%	46.0%	14.8%	14.6%	3.0%	3544
Vaupés	42.9%	28.6%	14.3%	0.0%	14.3%	7
Vichada	18.0%	45.9%	14.8%	15.4%	5.9%	460
Villavicencio	21.9%	48.3%	14.7%	13.8%	1.3%	4036
Yopal	23.6%	44.5%	16.1%	13.9%	1.9%	1313
Yumbo	24.7%	42.9%	16.8%	14.6%	1.1%	941
Zipaquirá	19.3%	49.9%	16.7%	12.9%	1.3%	1026
Colombia	21.0%	46.1%	15.9%	14.4%	2.6%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

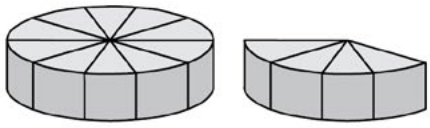
- **Pregunta 35.**

En una tienda se ofrecen quesos, enteros o en porciones iguales de 1 libra, como lo muestra el siguiente dibujo.

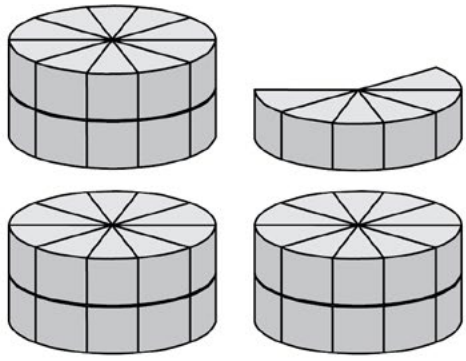


Una libra de queso cuesta $4.000. ¿En cuál de las gráficas se representa el máximo número de libras que se puede comprar con $56.000?

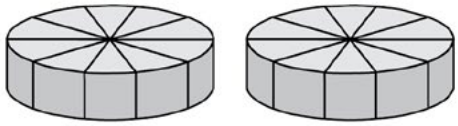
A.



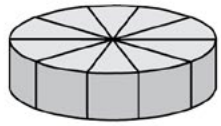
B.



C.



D.



• Estructura

Competencia	Planteamiento y resolución de problemas
Componente	Numérico - variaciomal
Afirmación	Resolver y formular problemas que requieren el uso de la fracción como parte de un todo, como cociente y como razón.
Nivel de desempeño	Avanzado
Respuesta correcta	A

• Resultados a nivel nacional y de Entidad Territorial Certificada (ETC)

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Amazonas	26.4%	39.0%	17.1%	12.0%	5.6%	785
Antioquia	36.6%	36.7%	14.7%	9.8%	2.2%	21531
Apartadó	36.6%	31.6%	17.0%	12.5%	2.3%	1236
Arauca	41.5%	30.7%	14.8%	11.2%	1.8%	2030
Armenia	38.4%	34.9%	17.6%	8.3%	0.8%	2024
Atlántico	33.6%	32.8%	16.6%	12.6%	4.5%	4442
Barrancabermeja	39.5%	31.4%	16.4%	10.6%	2.1%	1778
Barranquilla	39.1%	32.9%	15.4%	11.3%	1.4%	7996
Bello	38.3%	36.3%	16.6%	7.6%	1.2%	3080
Bogotá, D.C.	43.3%	32.0%	14.7%	7.6%	2.5%	52988
Bolívar	28.9%	34.7%	17.9%	14.5%	4.1%	7955
Boyacá	38.6%	34.9%	15.5%	10.0%	1.0%	7149
Bucaramanga	49.2%	29.8%	12.6%	7.1%	1.2%	3980
Buenaventura	35.9%	33.7%	13.7%	13.2%	3.5%	2558
Buga	39.1%	32.1%	16.8%	7.9%	4.2%	864
Caldas	41.2%	36.1%	13.3%	8.0%	1.4%	4335
Cali	40.5%	32.6%	15.0%	9.3%	2.5%	14287
Caquetá	43.3%	30.5%	13.8%	10.7%	1.9%	2298
Cartagena	36.0%	32.3%	16.9%	12.2%	2.6%	8181
Cartago	39.0%	34.5%	15.2%	9.4%	2.0%	798
Casanare	38.3%	32.5%	16.4%	11.2%	1.7%	2150
Cauca	40.3%	33.9%	12.9%	9.9%	3.1%	8897
Cesar	39.5%	31.9%	14.1%	12.2%	2.3%	6127
Chocó	28.2%	35.3%	15.7%	14.6%	6.2%	2815
Chía	43.3%	29.7%	16.4%	9.4%	1.1%	958

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Ciénaga	39.3%	29.3%	12.5%	13.6%	5.3%	1135
Cundinamarca	42.9%	33.5%	14.1%	8.3%	1.3%	11858
Córdoba	32.6%	36.7%	15.8%	12.3%	2.6%	9413
Cúcuta	44.7%	29.9%	14.3%	9.9%	1.2%	5518
Dosquebradas	40.2%	33.0%	17.1%	8.7%	1.0%	1248
Duitama	50.2%	27.8%	13.8%	7.8%	0.3%	1035
Envigado	49.5%	29.9%	13.5%	6.7%	0.3%	1218
Facatativá	43.3%	32.4%	15.9%	7.9%	0.5%	1064
Florencia	37.3%	33.2%	17.2%	10.7%	1.6%	1474
Floridablanca	48.6%	30.3%	14.0%	5.7%	1.4%	1854
Fusagasugá	40.5%	34.6%	16.0%	7.6%	1.3%	1058
Girardot	39.1%	36.3%	13.3%	9.7%	1.7%	777
Girón	41.2%	31.1%	16.0%	10.8%	1.0%	1013
Guainía	0.0%	66.7%	0.0%	0.0%	33.3%	3
Guaviare	33.6%	32.3%	19.7%	10.3%	4.1%	709
Huila	41.6%	34.0%	14.2%	9.1%	1.0%	6415
Ibagué	43.3%	31.5%	15.5%	8.9%	0.8%	3973
Ipiales	45.9%	31.2%	13.9%	7.9%	1.2%	1014
Itagüí	35.3%	37.0%	17.2%	8.8%	1.8%	1364
Jamundí	37.4%	32.8%	16.9%	10.2%	2.6%	871
La Guajira	37.8%	32.1%	15.6%	11.3%	3.2%	2482
Lorica	30.5%	36.6%	17.4%	12.3%	3.2%	1141
Magangué	31.7%	34.6%	16.7%	13.5%	3.4%	1220
Magdalena	31.4%	34.1%	15.7%	14.5%	4.3%	6283
Maicao	31.9%	31.6%	15.6%	14.5%	6.5%	1425
Malambo	40.3%	29.9%	14.2%	12.7%	2.9%	953
Manizales	41.9%	35.2%	14.3%	7.6%	1.0%	2322
Medellín	35.0%	36.2%	17.8%	9.5%	1.5%	16104
Meta	38.9%	31.8%	15.7%	10.3%	3.2%	3977
Montería	35.4%	34.4%	16.4%	12.2%	1.6%	3791
Mosquera	41.5%	33.6%	15.9%	8.0%	1.0%	880
Nariño	47.0%	29.6%	11.6%	8.7%	3.1%	7282
Neiva	40.3%	31.4%	15.7%	11.0%	1.6%	3000
Norte de Santander	45.2%	30.9%	13.6%	9.2%	1.0%	5753
Palmira	41.9%	33.6%	13.4%	9.4%	1.7%	2079
Pasto	43.9%	33.7%	14.7%	7.1%	0.7%	3137
Pereira	41.8%	32.7%	15.4%	8.1%	2.0%	3510
Piedecuesta	44.2%	30.7%	14.5%	9.3%	1.3%	1103
Pitalito	38.0%	35.9%	15.6%	9.5%	1.1%	1277

Continúa en la siguiente página

ETC/País	A	B	C	D	Omisión y multimarca	N° estudiantes
Popayán	46.5%	32.4%	12.0%	7.5%	1.7%	2102
Putumayo	36.9%	34.8%	16.1%	10.6%	1.7%	3240
Quibdó	27.4%	36.9%	16.8%	14.4%	4.5%	1068
Quindío	36.5%	35.2%	15.3%	11.1%	1.9%	2172
Riohacha	31.7%	35.0%	16.4%	14.1%	2.9%	1684
Rionegro	40.5%	33.9%	16.8%	8.4%	0.5%	838
Risaralda	37.7%	37.3%	13.8%	9.4%	1.7%	2245
Sabaneta	36.3%	36.3%	17.9%	8.3%	1.3%	375
Sahagún	32.0%	39.5%	17.2%	9.8%	1.5%	956
San Andrés	26.2%	35.0%	21.1%	13.2%	4.4%	454
Santa Marta	36.9%	32.2%	16.0%	11.7%	3.2%	4144
Santander	45.5%	31.3%	12.8%	9.3%	1.2%	6470
Sincelejo	36.4%	33.6%	15.9%	11.8%	2.3%	2541
Soacha	42.3%	34.2%	14.4%	8.1%	1.0%	4164
Sogamoso	44.0%	32.5%	15.5%	7.4%	0.6%	1088
Soledad	40.6%	32.0%	15.2%	11.1%	1.1%	3913
Sucre	31.8%	35.0%	16.4%	14.3%	2.6%	5581
Tolima	40.0%	34.2%	14.4%	9.6%	1.8%	7479
Tuluá	40.4%	34.0%	16.3%	8.1%	1.2%	1602
Tumaco	29.5%	35.3%	15.9%	11.8%	7.4%	1891
Tunja	43.4%	33.8%	13.9%	8.0%	1.0%	1342
Turbo	28.1%	36.5%	16.2%	14.4%	4.9%	1484
Uribia	33.5%	33.0%	14.4%	16.1%	3.0%	403
Valle del Cauca	39.2%	34.8%	14.2%	10.0%	1.8%	6241
Valledupar	39.7%	32.4%	13.9%	11.5%	2.5%	3544
Vaupés	0.0%	28.6%	0.0%	42.9%	28.6%	7
Vichada	35.2%	34.6%	16.3%	9.6%	4.3%	460
Villavicencio	45.3%	29.7%	15.2%	8.7%	1.1%	4036
Yopal	41.7%	32.0%	15.9%	8.8%	1.6%	1313
Yumbo	35.1%	34.1%	18.6%	10.6%	1.6%	941
Zipaquirá	44.7%	29.0%	17.1%	8.1%	1.1%	1026
Colombia	39.5%	33.4%	15.1%	9.9%	2.2%	366779

*Es posible que los porcentajes mostrados no sumen exactamente 100 debido a aproximaciones decimales.

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