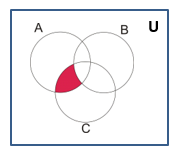
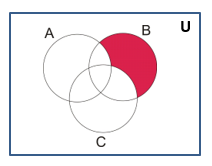
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**INTRODUCCIÓN AL CÁLCULO-MA611- Kick off UPC EPE y WS**

**Semana Nro. 1 Sesión 2 - Teoría de Conjuntos**

1. En los siguientes espacios complete las operaciones de conjuntos a realizar para obtener la zona sombreada mostrada.





1. Dados los conjuntos:

 y  y C = {-2; -1; 0; 1; 2; 3}

Determine:

1. ( A- B) Rpta. {-1; 0;1; 2; 3}
2.  Rpta. 9
3. Rpta. { }

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1. En un evento donde asisten 250 personas; 120 son hombres, 180 no estudiaron administración de empresas, 50 mujeres estudiaron administración de empresas. ¿Cuántos hombres no estudiaron administración de empresas? Rpta. 100 hombres

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1. En un aula de 42 alumnos; 18 son mujeres, 29 usan libro de matemáticas, 8 mujeres no usan libro de matemáticas. ¿Cuántos hombres no usan libro de matemáticas? Rpta. 5 hombres

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1. Finalizando el año escolar de un salón de clases de 56 alumnos, se tiene que 38 alumnos aprueban el curso de física, 41 alumnos aprueban el curso de matemática y 8 alumnos no aprobaron ningún curso; entonces:
2. ¿Cuántos aprobaron ambos cursos? Rpta. 31 alumnos
3. ¿Qué porcentaje del salón de clases representan los que aprobaron ambos cursos? Rpta. 55,36%

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1. De un grupo de 140 personas, 50 de ellos son mujeres, 93 estudian matemática y 27 mujeres no estudian matemática.
2. ¿Cuántos hombres no estudian matemática? Rpta. 20 hombres
3. ¿Qué porcentaje de las mujeres no estudian matemática? Rpta. 54 %
4. ¿Qué porcentaje de los que estudian matemática son hombres? Rpta. 75,27 %

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1. De 88 personas encuestadas sobre las preferencias de revistas a leer, se ha obtenido que 20 mujeres no leen revistas y de los encuestados 58 son varones. Si la cantidad de hombres que leen la revista es el 40% menos de las mujeres que no leen la revista; entonces:
2. ¿Cuántas mujeres de las encuestadas leen revistas?
3. De las personas que no leen, ¿qué porcentaje son hombres?

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1. De un grupo de 200 personas; 30 son hombres, 48 hablan inglés, 10 hombres hablan inglés. ¿Cuántas mujeres no hablan inglés? Rpta. 132 mujeres

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1. Un jefe de publicidad ha entrevistado a 2000 personas para apreciar los efectos de tres campañas publicitarias, con los siguientes resultados:

580 personas conocen la campaña A

840 personas conocen la campaña B

920 personas conocen la campaña C

260 personas conocen la campaña A y B

220 personas conocen la campaña A y C

300 personas conocen la campaña B y C

100 personas conocen las tres campañas

Se desea saber:

1. ¿Cuántas personas conocen sólo la campaña A?, ¿sólo la campaña B?, ¿sólo la campaña C?
2. ¿Cuántas personas conocen sólo las campañas A y B?, ¿Cuántas personas conocen sólo las campañas A y C?, ¿Cuántas personas conocen sólo las campañas B y C?,
3. ¿Cuántas personas conocen la campaña B, la C o ambas?
4. ¿Cuántas personas no conocen ninguna de las campañas?

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1. El departamento de publicidad de cierta compañía interroga a una muestra de 1 000 clientes seleccionados de entre todos los que abrieron su cuenta de crédito en el pasado mes de diciembre y, se les preguntó si su crédito fue utilizado para comprar artículos para el hogar, artículos de vestir o juguetes. Los resultados fueron los siguientes:

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| **Mercancía** | **Número de personas** |
| Artículos para el hogar | 275 |
| Artículos de vestir | 400 |
| Juguetes | 550 |
| Artículos de hogar y de vestir | 150 |
| Artículos de hogar y juguetes | 110 |
| Artículos de vestir y juguetes | 250 |
| Artículos de vestir, del hogar y juguetes | 100 |

1. ¿Cuántas personas no usaron su tarjeta de crédito en alguna de esas tres mercancías?
2. ¿Cuántas personas utilizaron su tarjeta crédito sólo para comprar artículos de vestir?
3. ¿Cuántas personas utilizaron su crédito para comprar artículos de vestir y juguetes, pero no de hogar?

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1. Una cierta compañía de suministros metálicos (distribuidora de artículos de ferretería) ha adquirido un lote de tuercas a granel en una subasta de la Dirección de Aduanas. Una muestra de 500 tuercas reveló que éstas pueden utilizarse en tres operaciones básicas como se indica a continuación:

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| **Operación** | **Número de tuercas** |
| Contrapieza | 255 |
| Soporte | 215 |
| Contrapieza y soporte, exclusivamente | 25 |
| Contrapieza y nivelación | 125 |
| Sólo nivelación | 105 |
| Contrapieza o soporte | 395 |
| Nivelación y soporte | 60 |

Se desea saber:

1. Número de tuercas que se pueden utilizar en las tres operaciones.
2. Número de tuercas que tienen que ser desechadas.

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