Minnesota MCA Grade 5 Math Practice

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Grade 5 Formula Sheet

You may use the following formulas to solve problems on this test.

Formulas	Variables
$A = b \times h$ $A = \frac{1}{2} \times b \times h$	A = area b = base h = height

Name _____

Minnesota Comprehensive Assessments-Series III

Mathematics Item Sampler
Grade 5

m DEPARTMENT OF EDUCATION

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1. Divide.

$$2{,}564 \div 8$$

A. 32 r4

B. 308

C. $320\frac{1}{5}$

D. 320.5

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2. Which number has a 5 in the ten thousandths place?

A. 0.20815
B. 0.30256
C. 0.40571
D. 0.50098

Go on to the next page.

3. Johan's race time was 45.03 seconds. Kyle's race time was 0.1 second less than Johan's time. What was Kyle's race time?

    A. 44.03 seconds

    B. 44.93 seconds

    C. 45.13 seconds

    D. 45.14 seconds

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4. What is 0.45831 rounded to the nearest thousandth?

    A. 0.45

    B. 0.458

    C. 0.459

    D. 0.4583

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5. Add.

$$45.908 + 3.26$$

    A. 46.234

    B. 49.168

    C. 49.24

    D. 78.508

6. A fraction model is shown.
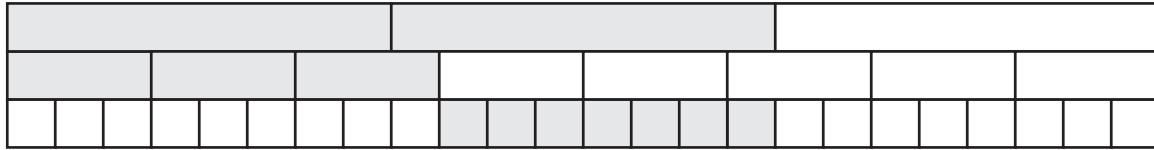
What is represented by the model?

A. $\dfrac{2}{1} - \dfrac{3}{5}$

B. $\dfrac{2}{3} - \dfrac{3}{8}$

C. $\dfrac{2}{3} - \dfrac{1}{5}$

D. $\dfrac{3}{8} - \dfrac{7}{24}$

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7. Yesterday, Jamal read 17 pages in his book. Today, he read more pages than he read yesterday. Which inequality shows p, the number of pages Jamal could have read today?

A. $p < 17$

B. $p \leq 17$

C. $p > 17$

D. $p \geq 17$

8. How many edges does a hexagonal prism have?

    A. 6

    B. 8

    C. 12

    D. 18

9. Jan has 500 pieces of paper. She prints as many copies as possible of a 16-page report. How many pieces of paper are left?
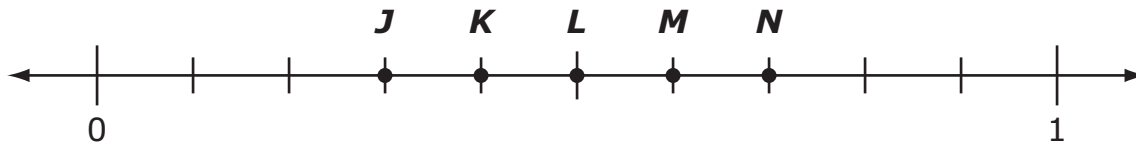
    A. 4

    B. 9

    C. 25

    D. 31

2

10. A bookcase has 4 shelves. The bottom shelf has 10 books. Each of the other shelves has 5 more books than the shelf below it. How many books are in the bookcase?

    A. 25

    B. 40

    C. 55

    D. 70

11. Five points are shown on a number line.

Between which 2 points is $\frac{7}{16}$ located?

A. *J* and *K*

B. *K* and *L*

C. *L* and *M*

D. *M* and *N*

2

12. Lydia used $\frac{1}{25}$ of her notebook paper. What decimal amount did she use?

A. 0.04

B. 0.4

C. 1.25

D. 2.5

13. Jill is $48\frac{5}{8}$ inches tall. Lei is 47.5 inches tall. What is the difference in their heights?

   A. 0.125 inches

   B. 1.08 inches

   C. 1.125 inches

   D. 1.62 inches

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14. At a movie store, Erin pays a monthly fee and is charged for each movie she rents. The table shows the monthly cost when Erin rents different numbers of movies.
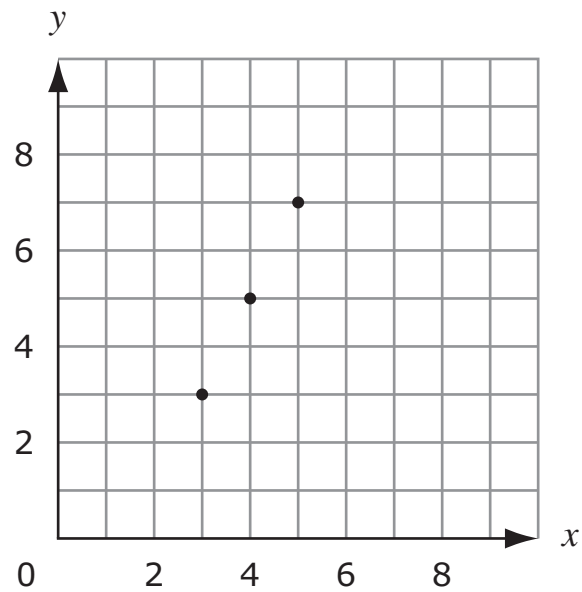
Monthly Cost

Number of Movies	Total Cost (dollars)
6	33
8	39
10	45

How much is the monthly fee that Erin pays?

   A. $3

   B. $6

   C. $15

   D. $18

15. Three points are shown on a grid.

Which rule was used to plot the points?

A. $y = x$

B. $y = x + 2$

C. $y = \dfrac{1}{2}x + 3$

D. $y = 2x - 3$

Go on to the next page.

16. An expression is shown.

$$4 + 3(6 + 10) \div 2$$

What is the value of the expression?

A. 16
B. 26
C. 28
D. 56

2

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17. Which value makes the equation $5b + 15 = 30$ true?

A. $b = 3$
B. $b = 9$
C. $b = 10$
D. $b = 75$

18. What is the value of $4k + 6(j - 2)$ when $k = 3$ and $j = 5$?

    A. 26

    B. 30

    C. 40

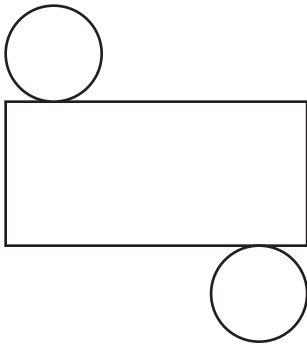   **D.** 108

2

Please write your answer in the space below the question. You may use the digits: 0–9 and the symbols: slash for a fraction bar (/) and a decimal (.). If your answer is a mixed number, you must change it to an improper fraction or a decimal.

19. A triangle has a height of 25 feet. The length of its base is 12 feet. What is the area of the triangle?
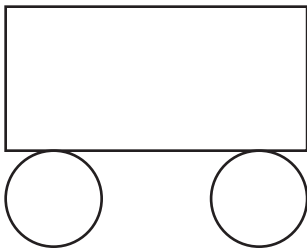
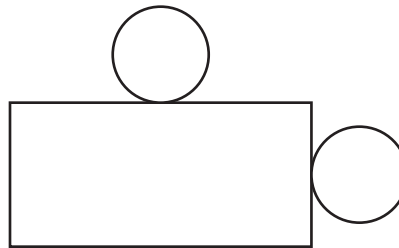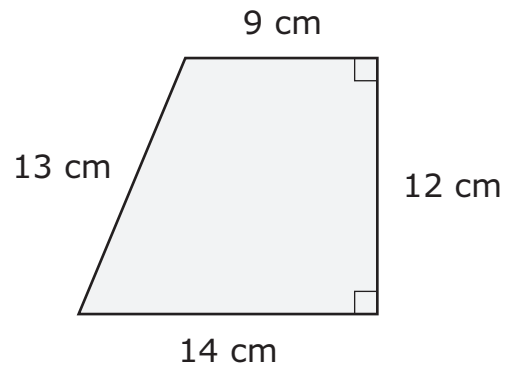**20.** Which net makes a cylinder?

A.

B.

2

C.

D.

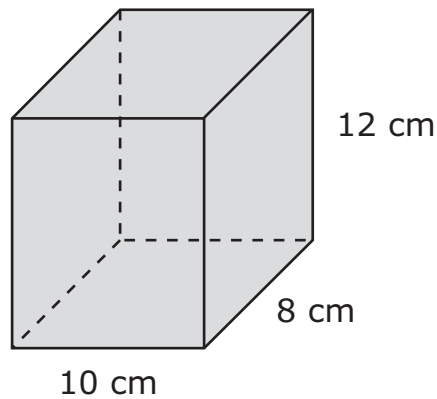**21.** A trapezoid is shown.

9 cm

13 cm

12 cm

14 cm

What is the area of the trapezoid?

A. 48 cm^2

B. 138 cm^2

C. 168 cm^2

D. 173 cm^2

22. Amy covers the box shown with paper.

12 cm

8 cm

10 cm

What is the surface area of the box?

A. 180 sq. cm
B. 296 sq. cm
C. 592 sq. cm
D. 960 sq. cm

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23. A rectangular prism has a height of h cm. The area of its base is B cm^2. How much does the volume of the prism increase when the height is increased by 1 cm?

A. 1 cm^3

B. $h+1$ cm^3

C. B cm^3

D. $B+1$ cm^3

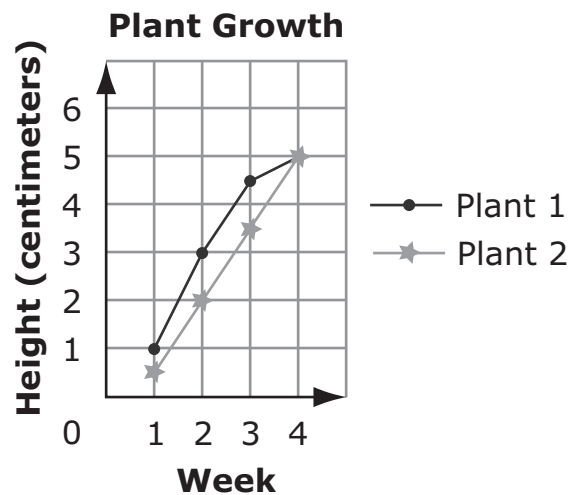**24.** Anya listed the prices of meals on a menu.

$14.85 $10.75 $8.50 $12.45 $9.20

What is the mean price of the meals?

A. $6.35

B. $8.50

C. $10.75

D. $11.15

2

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25. Maria recorded the heights of 2 plants for 4 weeks.

How much did plant 2 grow from week 1 to week 2?

A. 1 cm

B. $1\frac{1}{2}$ cm

C. 2 cm

D. $4\frac{1}{2}$ cm