

No Calculator

Lesson 30

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. Of the following, which is the closest approximation of a 15 percent tip on a restaurant check of \$24.99?
 - A. \$2.50
 - B. \$3.00
 - C. \$3.75
 - D. \$4.50

2. $3^3 + 4(8 - 5) \div 6 =$
 - A. 6.5
 - B. 11
 - C. 27.5
 - D. 29

Lesson 31

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. The 7th- and 8th-grade classes each have 120 students. If $\frac{3}{4}$ of the 7th-grade class and $\frac{2}{3}$ of the 8th-grade class went to the pep rally, how many more 7th graders than 8th graders went to the rally?
- A. 10
- B. 80
- C. 90
- D. 170

Use the pattern below to answer question 2.

42, 51, 49, 58, 56, . . .

2. If the pattern in the list above continues, what will be the next number after 56?
- A. 54
- B. 63
- C. 64
- D. 65

Lesson 32

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. If $n + n + n = 60$, what is the value of n ?
 - A. 6
 - B. 10
 - C. 15
 - D. 20

2. A plumber charges customers \$48 for each hour worked plus an additional \$9 for travel. If h represents the number of hours worked, which of the following expressions could be used to calculate the plumber's total charge in dollars?
 - A. $48 + 9 + h$
 - B. $48 \times 9 \times h$
 - C. $48 + (9 \times h)$
 - D. $(48 \times h) + 9$

Lesson 33

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. A bag contains two red candies and one yellow candy. Kim takes out one candy and eats it, and then Jeff takes out one candy. Of the following sentences, which one **cannot** be true?
 - A. Kim's candy is red, and Jeff's candy is red.
 - B. Kim's candy is red, and Jeff's candy is yellow.
 - C. Kim's candy is yellow, and Jeff's candy is red.
 - E. Kim's candy is yellow, and Jeff's candy is yellow.

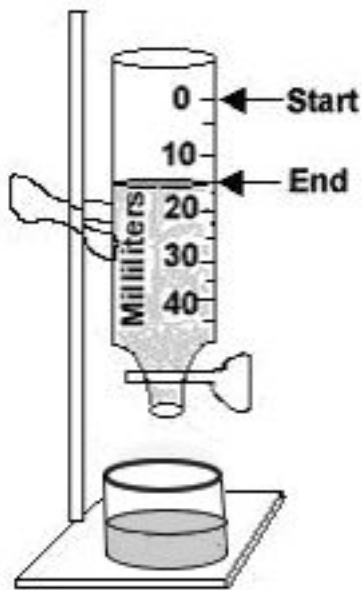
2. There are 15 girls and 11 boys in a mathematics class. If a student is selected at random to run an errand, what is the probability that a boy will be selected?
 - A. $\frac{4}{26}$
 - B. $\frac{11}{26}$
 - C. $\frac{15}{26}$
 - D. $\frac{11}{15}$

Lesson 34

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. A square tile measures 6 inches by 6 inches. What is the least number of tiles needed to cover a rectangular floor area of 9 feet by 12 feet?
 - A. 3 tiles
 - B. 108 tiles
 - C. 216 tiles
 - D. 432 tiles

Use the figure below to answer question 2.

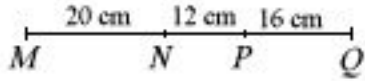


2. In the figure above, the tube was filled to the 0 mark at the start. How much liquid has been let out?
 - A. 10 milliliters
 - B. 15 milliliters
 - C. 25 milliliters
 - D. 40 milliliters

Lesson 35

You **MAY NOT** use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

Use the figure below to answer question 1.



1. What is the distance between the midpoint of MN and the midpoint of PQ shown above?
 - A. 24 cm
 - B. 26 cm
 - C. 28 cm
 - D. 30 cm

2. Which of the diagrams below **best** shows a translation of -4 units of the dark triangle?
 - A.
 - B.
 - C.
 - D.

Lesson 36

You MAY NOT use a calculator to answer these questions. Be prepared to explain how you got your answer.

1. The weight of an object on the Moon is $\frac{1}{6}$ the weight of that object on Earth. An object that weighs 30 pounds on Earth would weigh how many pounds on the Moon?

2. The cost to rent a motorbike is given by the following formula:

$$\text{Cost} = (\$3 \times \text{number of hours}) + \$2$$

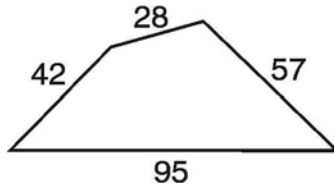
Fill in the table below.

Time in Hours	Cost in Dollars
1	5
4	
5	

Lesson 38

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

Use the figure below to answer question 1.



- Which is the best estimate of the perimeter of the figure above?
 - 200
 - 300
 - 400
 - 500

Use the information below to answer question 2.

The seven members of the Williams family were planning a day trip to Calloway Gardens in Pine Mountain, Georgia. The table below shows the ticket prices for Calloway Gardens.

Tickets	
Adults	\$10.00
Children (ages 6 –12).....	\$5.00
Children under 6	Free

- How much will the Williams family spend on tickets for Mom, Dad, Grandma, Granddad, 5-year-old twins (Kelli and Keith) and 10-year-old Bobby?
 - \$55
 - \$45
 - \$40
 - \$35

Lesson 39

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. Faith paid \$25.10 for a newspaper ad. The newspaper charged \$5.02 for 3 lines of print. How many lines was the ad?
 - A. 5 lines of print
 - B. 15 lines of print
 - C. 25 lines of print
 - D. 75 lines of print

2. James ran 48 yards and Susan ran 150 feet. What is the difference in the number of feet James and Susan ran?
 - A. Susan ran 144 feet more than James.
 - B. James ran 2 feet more than Susan.
 - C. Susan ran 6 feet more than James.
 - D. James ran 102 feet more than Susan.

Lesson 40

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. The temperature in Chicago is measured at 6 a.m. each day. On February 20, it was 15°C below zero (-15°C). The temperature rose 8° on February 21 and dropped 2° on February 22. What was the temperature on February 22nd?

 - A. 21°C
 - B. 5°C
 - C. -5°C
 - D. -9°C

2. Betsy's spelling test scores were 65, 80, 85, 70, and 70. What is her average (mean) score in spelling?

 - A. 65
 - B. 70
 - C. 74
 - D. 75

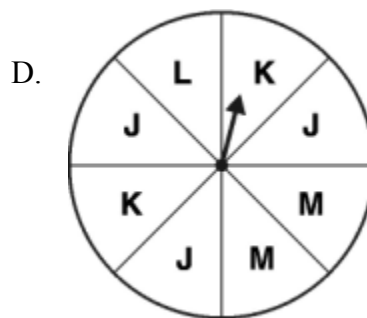
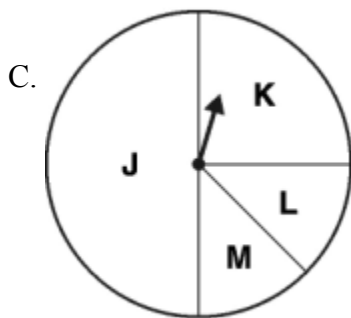
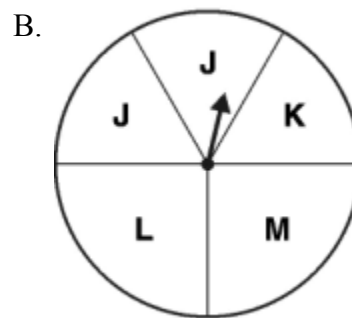
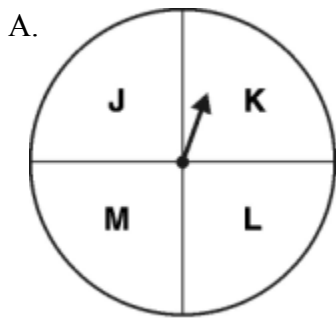
Lesson 41

You **MAY NOT** use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. The soccer team scored 3 goals in each of their first two games, 7 goals in the next game, and 2 goals in each of the last four games. What was the average (mean) number of goals the team scored per game?

- A. 2
- B. 3
- C. 4
- D. 5

2. For which spinner is the probability of spinning J equal to $\frac{1}{3}$?

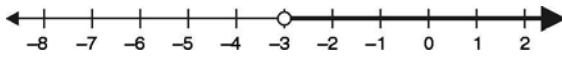


Lesson 42

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. If $y = 4x + 6$ and $x = 4$, what is the value of y ?
- A. 50
 - B. 40
 - C. 22
 - D. 14

Use the line graph below to answer question 2.

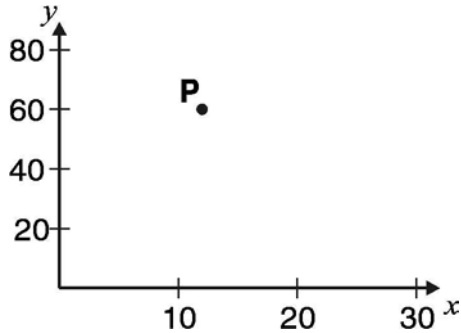


2. What is the solution set of the graph above?
- A. $x < -3$
 - B. $x \leq -3$
 - C. $x > -3$
 - D. $x^3 - 3$

Lesson 43

You **MAY NOT** use a calculator to answer these questions. Be prepared to explain how you got your answer.

Use the graph below to answer question 1.



- Which of the following are most likely to be the coordinates of point P?
 - (12,60)
 - (60,12)
 - (12,12)
 - (60,60)

Use the information below to answer question 2.

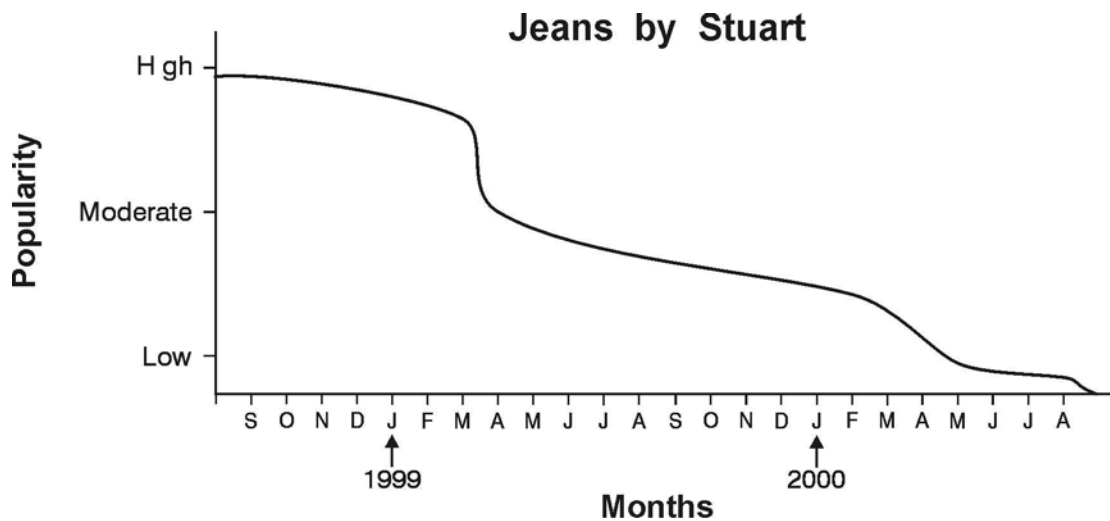
Parking Rates
\$0.75 for first hour
\$0.50 for each additional hour or part of an hour
\$5.00 daily maximum

- At 10:03 A.M., you enter a parking garage. The parking rates are posted on the sign at the entrance. You leave the garage at 3:48 in the afternoon. If you give the parking attendant a ten dollar bill, how much change should you receive?

Lesson 44

Use the information below to answer the following question.

Over a two-year period, Monique surveyed seventh- and eighth-grade students at Barrett Middle School about attitudes toward a style of jeans first marketed by “Jeans by Stuart.” The graph pictured below shows the results.



- A. Describe what has happened to the popularity of “Jeans by Stuart” over the two-year period.
- B. Give two specific reasons why you think the changes may have occurred.

Lesson 45

You MAY NOT use a calculator to answer these questions. Be prepared to explain how you got your answer.

1. Jason has 208 baseball cards. This is 52 less than the number of cards that Jerry has.

A. Write an equation that can be used to find how many cards Jerry has.

B. Solve the equation. Show your work.

Lesson 46

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. Which unit should you use if you want to find the weight of a banana?
 - A. tons
 - B. milligrams
 - C. grams
 - D. kilograms

2. Mickey's Lawn Service charges a \$15 base fee plus \$8 per hour to mow lawns. Mickey charged Mrs. LeJeune \$39 to mow her lawn. Which equation could Mrs. Lejeune use to find out how many hours (h) it took Mickey to mow her lawn?
 - A. $15h + 8 = 39$
 - B. $15h - 8 = 39$
 - C. $8h + 15 = 39$
 - D. $23h = 39$

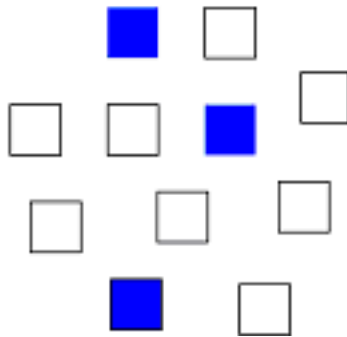
Lesson 47

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. Which is closest to the sum $4\frac{7}{8} + 2\frac{1}{5} + 5\frac{5}{6}$?

- A. $4 + 2 + 5$
- B. $5 + 2 + 6$
- C. $5 + 3 + 6$
- D. $5 + 2 + 5$

2. Suppose $\blacksquare = -1$ and $\square = 1$. What is the value of the following set?

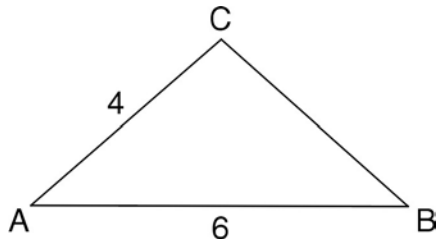


- A. -3
- B. $+5$
- C. $+8$
- D. $+11$

Lesson 48

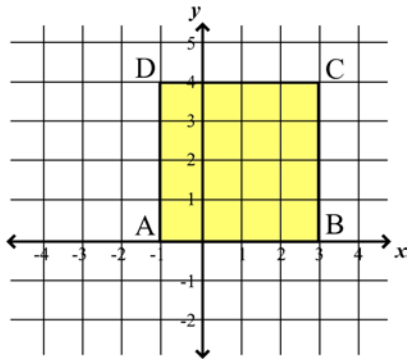
You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

Use the isosceles triangle below to answer question 1.



1. An isosceles triangle has two equal sides. ABC is an isosceles triangle whose base is \overline{AB} . Which of the following would be the perimeter of triangle ABC?
- A. 10 units
 - B. 12 units
 - C. 14 units
 - D. 20 units

Use the figure below to answer question 2.

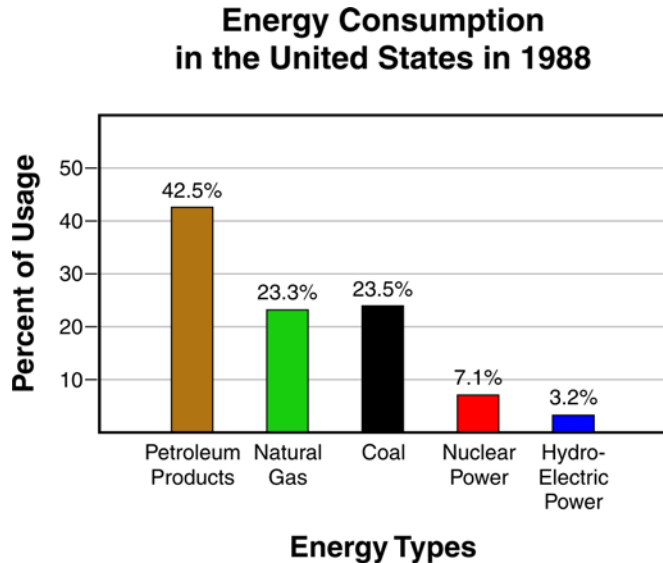


2. What are the coordinates of the point D?
- A. (1, -4)
 - B. (4, -1)
 - C. (-1, 4)
 - D. (-4, 1)

Lesson 49

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Use the graph below to answer question 1.



1. Which is a conclusion that could be made from these data?
- A. Nuclear and hydroelectric power together were used more than coal was used.
 - B. Coal and hydroelectric power combined were used more than coal and nuclear power combined.
 - C. More people used petroleum products than used coal and natural gas combined.
 - D. Petroleum and nuclear power use accounted for nearly half of the energy consumption.

Lesson 49 (continued)

2. A bag contains 2 cherry, 4 orange, and 6 grape jawbreakers. If one jawbreaker is drawn from the bag, what is the probability it is cherry?

A. $\frac{1}{2}$

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

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

D. $\frac{1}{12}$

Lesson 50

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. Both 54 and 72 are divisible by which group of numbers?

- A. 5, 6, 9
- B. 3, 6, 9
- C. 2, 6, 10
- D. 6, 9, 10

2. What is the value of this expression?

$$2 + 3 \times 6 - 7$$

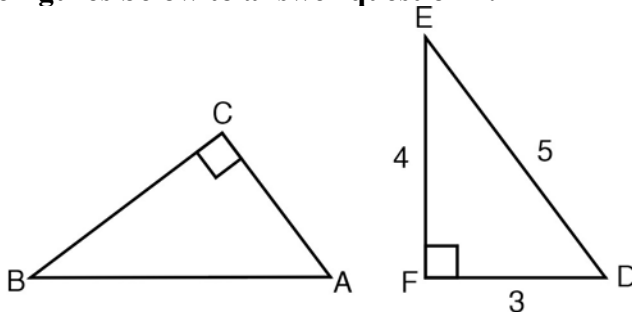
- A. 5
- B. 13
- C. 23
- D. 37

Lesson 51

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. Ben purchased $3\frac{1}{3}$ yards of blue fabric to make a new shirt. He also purchased $1\frac{1}{2}$ yards of yellow fabric and $\frac{3}{4}$ yard of green fabric for the trims. What is the total amount of fabric that Ben purchased?
- A. 4
- B. $4\frac{5}{9}$
- C. $5\frac{1}{6}$
- D. $5\frac{7}{12}$

Use the figures below to answer question 2.



2. If $\triangle ABC$ is congruent to $\triangle DEF$, what is the length of side \overline{AC} ?
- A. 3
- B. 4
- C. 5
- D. 12

Lesson 52

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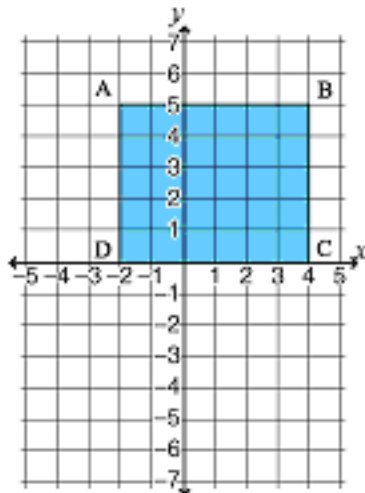
Use the table below to answer question 1.

School Enrollment

Grade	Number of Students
6	241
7	184
8	175

- The student council of Cedar Hills Middle School wanted to survey students' attitudes concerning school uniforms. If 40% of the students returned the survey, how many students returned the survey?

Use the diagram below to answer question 2.



- What will be the coordinates of point A if figure ABCD is reflected across the x -axis?

Lesson 54

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

- In one game, the running back for Grambling State ran for a total of 53 yards. The quarterback ran for a total of -8 yards. Which expression could be used to find out how many more yards the running back ran for than the quarterback?

 - $53 - (-8)$
 - $53 + (-8)$
 - $-8 - 53$
 - $-8 + 53$

- Jacob measured the distance from his school to his house and found that it was exactly 4.6 miles. Which statement is an accurate estimate of this distance?

 - It is between 4 and $4\frac{1}{4}$ miles.
 - It is between $4\frac{1}{4}$ and $4\frac{1}{2}$ miles.
 - It is between $4\frac{1}{2}$ and $4\frac{3}{4}$ miles.
 - It is between $4\frac{3}{4}$ and 5 miles.

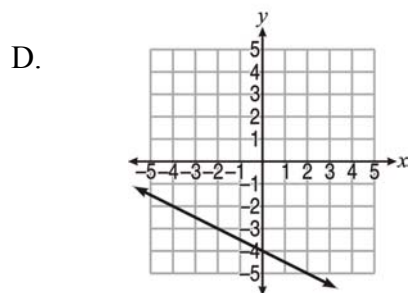
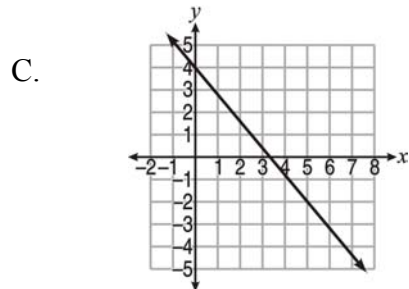
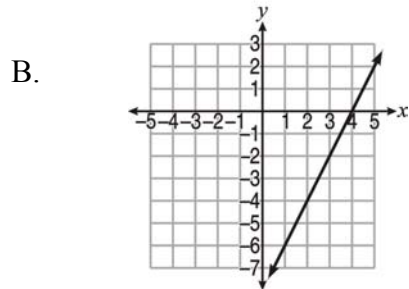
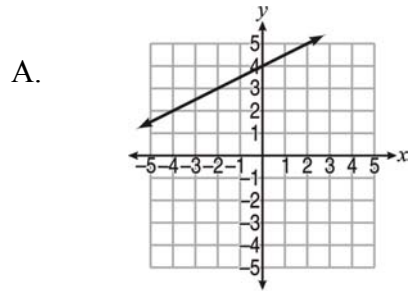
Lesson 55

You MAY NOT use a calculator to answer these questions. Circle the correct answer. Be prepared to explain how you got your answer.

1. Paul is moving from Maryland to Louisiana. He needs to rent a truck to move his belongings. The cost of the truck is \$59 plus \$0.15 per mile for all miles over 500 miles. For any distance over 500 miles, which equation could be used to calculate the cost, c , to rent the truck and drive it m miles?
- A. $c = 59 + 0.15 m$
 - B. $c = 59 + 0.15(500 m)$
 - C. $c = 59 + 0.15(500 - m)$
 - D. $c = 59 + 0.15(m - 500)$

Lesson 55 (continued)

2. Which graph shows the equation $y = \frac{1}{2}x + 4$?



Lesson 56

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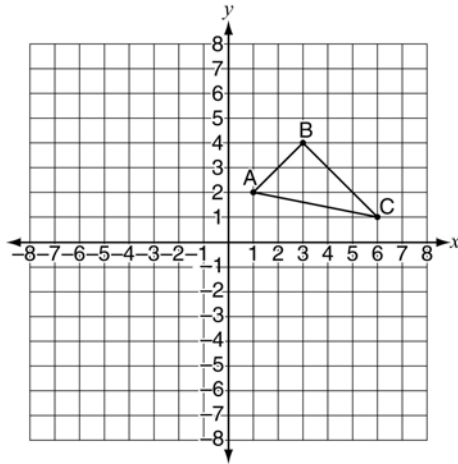
1. Which unit is **most** appropriate for measuring the mass of a hamster?
 - A. milligrams
 - B. millimeters
 - C. meters
 - D. grams

2. Which is the **best** estimate for the speed of a snail?
 - A. 5 yards per minute
 - B. 5 miles per minute
 - C. 5 yards per hour
 - D. 5 miles per hour

Lesson 57

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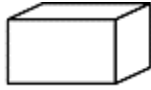
Use the figure below to answer question 1.



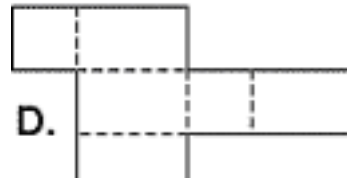
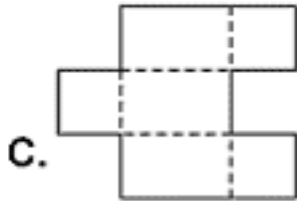
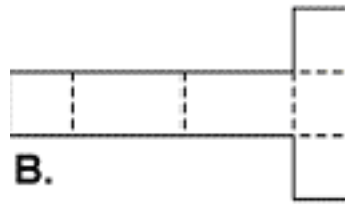
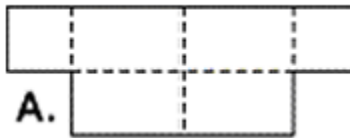
1. A graphic artist needs to reflect triangle ABC across the x-axis to create Figure $A'B'C'$. What are the coordinates of A' ?
 - A. (1, -2)
 - B. (2, -1)
 - C. (-1, 2)
 - D. (-2, 1)

Lesson 57 (continued)

2. Stan wants to make a paper box like the one shown below.



Which pattern could Stan fold to create the box with no sides overlapping?



Lesson 59

You MAY NOT use a calculator to answer these questions. Be prepared to explain how you got your answer.

Use the figures below to answer the following questions.

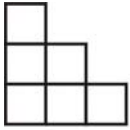


Figure 1

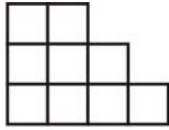


Figure 2

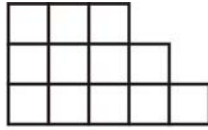


Figure 3

Figure 4

Figure 5

Figure 6

- A. How many blocks would be needed to make Figure 4 of this pattern?
- B. Write a mathematical equation that shows the relationship between the number of the figure (n) and the number of blocks (b) in the figure.
- C. Which figure number would contain 102 blocks? Explain your answer.