1. Pedro bought a 2-liter bottle of soda. What is the volume of the bottle in milliliters?

(a) 20,000 mL   (c) 200 mL

(b) 2,000 mL   (d) 20 mL

2. John is going to make three kinds of cookies. He will need 7/3 cups flour for the first kind, 9/4 cups flour for the second kind, and 10/3cups flour for the third kind. How much flour does John need for all three kinds of cookies?
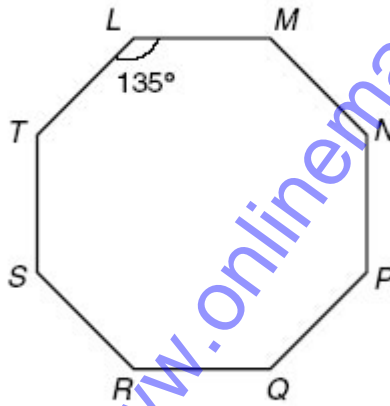
(a) 97/12   (c) 17/3

(b) 95/12   (d) 67/12

3. The angle at each vertex of a regular octagon is 135°.

What type of angle is at each vertex of a regular octagon?

(a) Obtuse   (c) Straight

(b) Right   (d) Acute

4. Bob's Lunch Café offers 3 kinds of sandwich fillings and 3 kinds of bread. Which table shows all the possible sandwich combinations at Bob's Lunch Café?

Sandwich Combinations

(a)

Bread	Sandwich Filling
White	Chicken
Wheat	Chicken
Sourdough	Chicken
White	Tuna
Wheat	Tuna
Sourdough	Tuna

Sandwich Combinations

(c)

Bread	Sandwich Filling
White	Chicken
Wheat	Tuna
Sourdough	Ham

Sandwich Combinations

(b)

Bread	Sandwich Filling
White	Chicken
White	Tuna
White	Ham
Wheat	Chicken
Wheat	Tuna
Wheat	Ham
Sourdough	Chicken
Sourdough	Tuna
Sourdough	Ham

Sandwich Combinations

(d)

Bread	Sandwich Filling
White	Chicken
White	Chicken
White	Chicken
Wheat	Tuna
Wheat	Tuna
Wheat	Tuna
Sourdough	Ham
Sourdough	Ham
Sourdough	Ham

5. Franklin's Vending Service received a shipment of soda for its machines. The manager determined that 15% of the cans were damaged. What fraction of the cans were damaged?
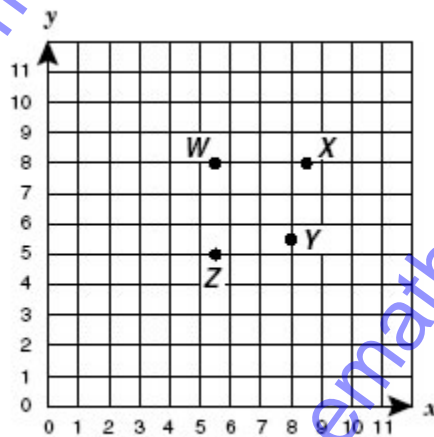
(a) 1/15   (c) 1/5

(b) 3/20   (d) 2/3

6. What point on the grid below corresponds to the coordinate pair (11/2, 8)?

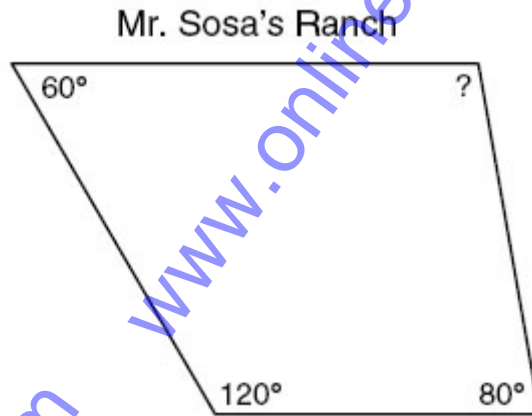(a) Point W   (c) Point Y

(b) Point X   (d) Point Z

7. Mr. Sosa has a ranch in the shape of a trapezoid. The sides of the ranch form angles measuring 60°, 80°, and 120°. What is the measure of the fourth angle?

Mr. Sosa's Ranch

(a) 80°   (c) 240°

(b) 100°   (d) 260°

8. Which is the prime factorization of 315?

(a) $3^3.5$ (c) $3^2.5.7$

(b) $3^3.7$ (d) $3.5^2.7$

9. If Mr. Albright drives at a constant speed of 65 miles per hour, which method can be used to find the number of hours it will take him to drive 260 miles?

(a) Add 65 and 260

(c) Multiply 260 by 65

(b) Subtract 65 from 260

(d) Divide 260 by 65

10. Manuel's heart beats 9 times per 10 seconds while Manuel is resting. About how many times would Manuel's heart beat during 3 minutes of rest?

(a) 27

(c) 270

(b) 162

(d) 200

11. Mr. and Mrs. Gunther tiled their rectangular porch using square tiles. Each box of tile contained 30 square tiles. The rectangular porch measured 38 feet by 22 feet. What missing piece of information is needed in order to find the number of boxes of tile the Gunthers needed?

(a) Area of each square tile

(c) Perimeter of the porch

(b) Perimeter of the box

(d) Area of the porch

12. Nate has a bag containing 3 red, 2 blue, 4 yellow, and 3 green marbles. If he randomly chooses one marble from the bag, what is the probability that the marble will be blue?

(a) 5/6

(c) 1/4

(b) 1/3

(d) 1/6

13. What is the rule to find the value of a term in the sequence below?

Sequence

Position, n	Value of Term
1	1
2	4
3	7
4	10
5	13
n	?

(a) $n + 3$

(c) 3n

(b) 3n-2

(d) n-2

14. Tickets for a circus performance cost $9.50 for an adult and $6.75 for a child. Mr. Snyder and some of his friends, a group of 4 adults and 5 children, went to the circus performance. Mr. Snyder paid for all the tickets.

Read the problem-solving steps shown below. Arrange the steps in the correct order for Mr. Snyder to find the total cost for the tickets.

Step K: Add the two products together

Step L: Write down the number of adults and the number of children going to the circus performance

Step M: Multiply the cost of an adult ticket by the number of adults

Step N: Multiply the cost of a child's ticket by the number of children

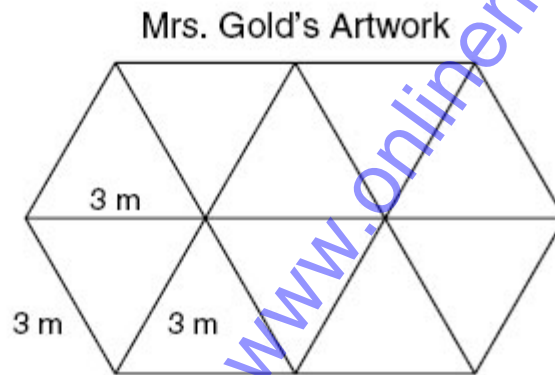Which list shows the steps in the correct order?

(a) L, K, M, N   (c) N, M, L, K

(b) L, M, N, K   (d) M, N, L, K

15. Mrs. Gold designed a piece of art by outlining equilateral triangles with wire.

Mrs. Gold's Artwork

How much wire did Mrs. Gold use to complete her piece of art?

(a) 9m

(c) 90m

(b) 33m

(d) 57m

16. Which statement about the mixed number $1\frac{1}{3}$ is true?

(a) $1\frac{3}{10} > 1\frac{1}{3}$

(c) $1\frac{1}{3} > 1\frac{3}{10}$

(b) $2 < 1\frac{1}{3}$

(d) $1\frac{1}{3} < 1\frac{1}{4}$

17. Gerald got out of bed at 7:05 A.M. and returned home from school at 2:50 P.M. About how many hours elapsed between the time he got out of bed and the time he returned home from school?

(a) 4 h   (c) 7h

(b) 5h   (d) 8h

18. Which of the following is the least common multiple that Valerie can use to add three fractions with denominators of 6, 8, and 9?

(a) 48   (c) 72

(b) 54   (d) 144

19. The formula $F = \frac{9}{5}C + 32$ can be used to convert a temperature from degrees Celsius to degrees Fahrenheit. Which of the following best represents $\frac{9}{5}$?

(a) 9.5   (c) 0.55

(b) 1.8   (d) 0.18

20. Mrs. Valcome has $25.00 to spend on seeds for her flower garden. Marigold seeds cost $1.50 per package, and zinnia seeds cost $1.25 per package, tax included. If Mrs. Valcome buys 10 packages of marigold seeds, how can she determine how much money she has left to spend on zinnia seeds?

(a) Add $1.50 and $1.25

(b) Subtract the product of 10 and $1.50 from $25.00

(c) Multiply $1.25 and 10

(d) Multiply $1.25 and 10

21. An animal shelter currently has 20 cats and 25 dogs. What is the ratio of cats to dogs?

(a) 5 to 4   (c) 4 to 5

(b) 4 to 9   (d) 1 to 5

22. The table below shows the areas of a triangle where the height of the triangle stays the same but the base changes.

Areas of Triangles

Height (units)	Base (units)	Area (square units)
6	2	6
6	4	12
6	6	18
6	8	24
6	n	?

Which expression can be used to find the area of a triangle that has a height of 6 units and a base of n units?

(a) n/2

(c) 6n/2

(b) 6/2

(d) 6n

23. Felicia went shopping for clothes. She bought a pair of jeans priced at $28.00, a sweater priced at $32.50, and a belt priced at $18.75. If there was an 8.75% tax on clothing items, which procedure could be used to find the amount of tax Felicia paid?

(a) Multiply the tax rate by the sum of the prices of the clothing items

(b) Add the prices of the clothing items to the tax rate

(b) Add the prices of the clothing items to the tax rate

(d) Multiply the tax rate by the price of the most expensive clothing item

24. Trevor knows the circumference of his bicycle tire, but he needs to find the diameter.
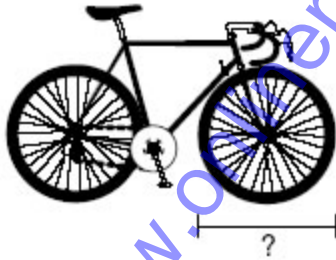
Which method can Trevor use to find the diameter?

(a) Multiply the circumference by 2 and divide the result by π

(b) Divide the circumference by 2 and multiply the result by π
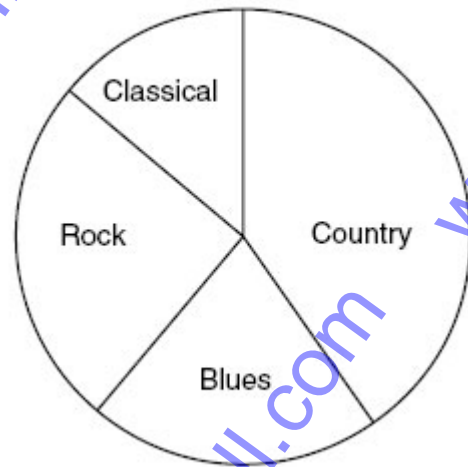
(b) Multiply the circumference by π

(d) Divide the circumference by π

25. At Central City Music Store, 15% of the music sold is classical, 20% is blues, 25% is rock, and 40% is country. Which graph best represents these data?

Central City Music Store
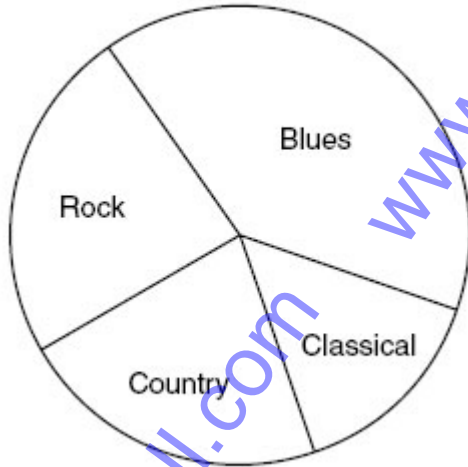
Blues

Rock

Classical

Country

(a)

Central City Music Store

Classical

Rock

Country

Blues

(c)

Central City Music Store

Country

Blues

Classical

Rock

(b)

Central City Music Store

Rock

Classical

Country

Blues
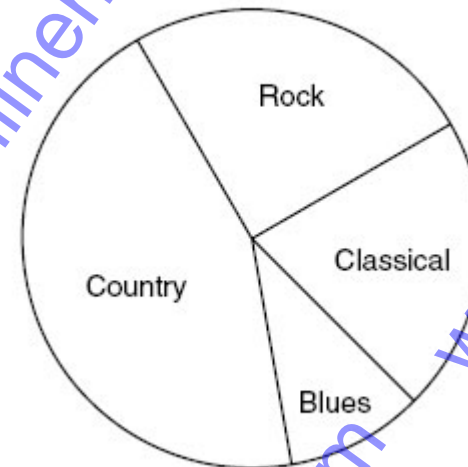
(d)

26. The Springer family took a trip for the holidays. When they left home, the odometer in their car read 5,364.6 miles. When they returned from their trip, the odometer read 7,347.0 miles. How many miles did the Springers travel?

(a) 1982.4

(c) 1862.4

(b) 1972.5

(d) 1952.6

27. Apollo Middle School collected the following data from students.

Birth Month of Sixth-Grade Students
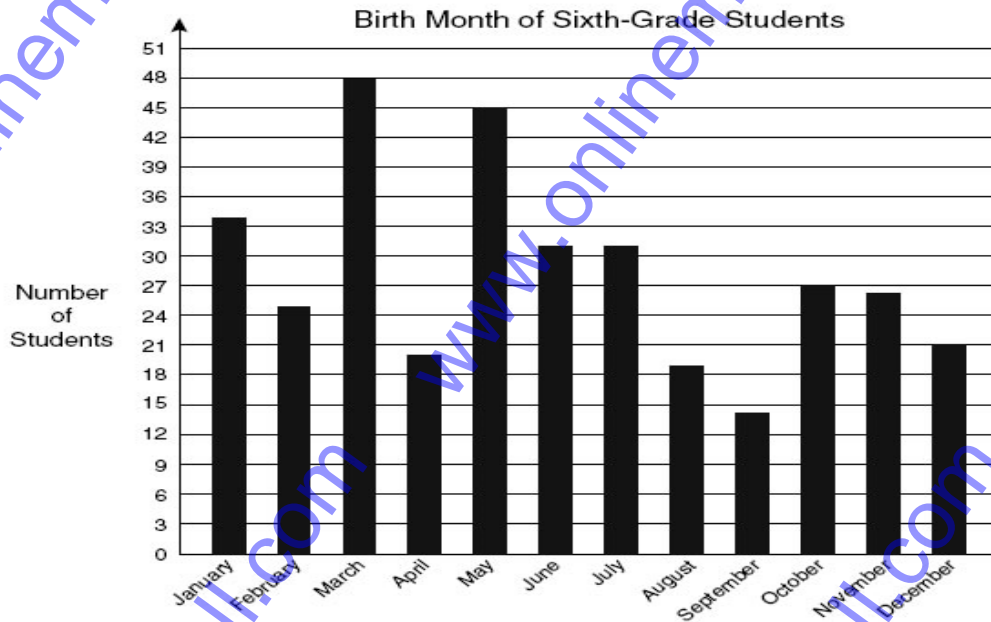
Which statement is supported by the graph?

(a) More than 25% of the students were born in either January or March.

(b) The second half of the year had fewer births than the first half.

(c) May was the birth month for 30 students

(d) The same number of births per month occurred in February, October, and November.

28. If the cost of renting a canoe is a basic fee of $5 plus an additional $2.50 for each hour that the canoe is rented, which equation can be used to find c, the cost in dollars of the rental for h hours?.

(a) $c = 2.5h + 5$

(b) $c = 5h + 2.5$

(c) $c = 2.5(h + 5)$

(d) $c = 5(h + 2.5)$

29. Mrs. Miller is baking cookies for 16 children. She has baked 2 dozen cookies. If she wants each child to receive exactly 2 cookies and have no cookies left over, how many more cookies should she bake?

(a) 1.5

(b) 8

(c) 24

(d) 32

30. Find the greatest common factor of 12, 24, and 36.

(a) 6

(b) 12

(c) 18

(d) 24

31. A family put a rectangular patio in their backyard and planted grass in the rest of the yard. The rectangular backyard is 100 feet by 80 feet, and the patio is 13 feet by 8 feet. What is the area of the backyard that is planted with grass?

Backyard

80 ft

8 ft 13 ft

100 ft
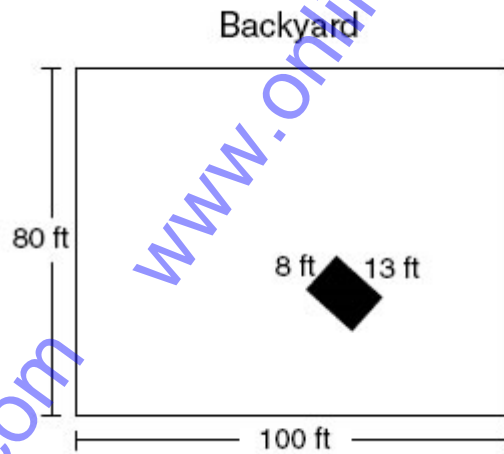
(a) 402 sq ft

(c) 8,000 sq ft

(b) 7,896 sq ft

(d) 8,104 sq ft

32. During basketball season Wanda made 2 out of every 3 free throws she attempted. In the last basketball game, Wanda attempted 12 free throws. How many free throws would she have been expected to make?
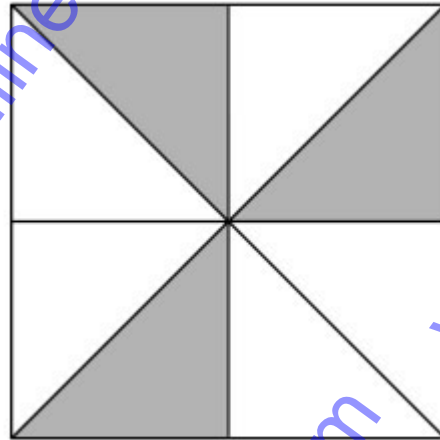
(a) 2
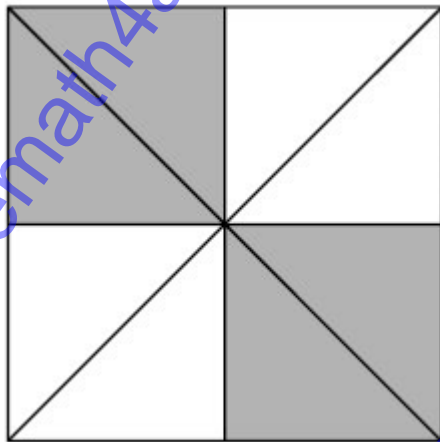
(c) 24

(b) 8

(d) 36

33. Each square below is divided into sections of equal size.
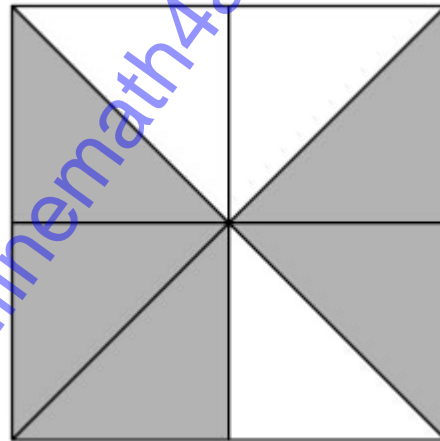Which square has 62.5% of its total area shaded?
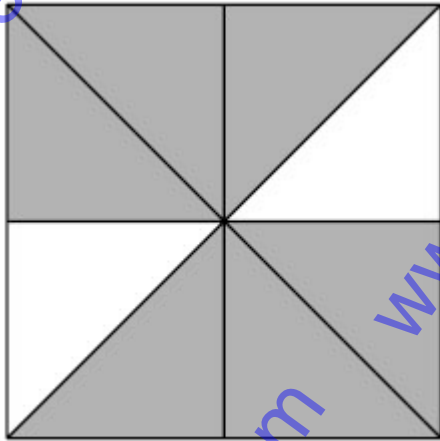
(a)

(c)

(b)

(d)

34. The Q&R Band performed concerts from 1992 to 2001. The table shows the number of concerts the band performed each year.

Q&R Band Performances

Year	Number of Concerts
1992	168
1993	172
1994	142
1995	180
1996	162
1997	162
1998	180
1999	180
2000	168
2001	172

What is the median of the number of concerts?

(a) 162   (c) 180

(b) 170   (d) 172

35. A triangle has angles measuring 45° and 55°. What is the measure of the triangle's third angle?

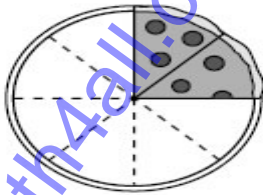(a) 80°   (c) 125°
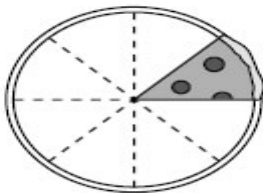
(b) 100⁰   (d) 135°

36. Frank and Joe each bought a small pizza and ate only part of their pizza. The pictures below show how much of the pizzas were left

Frank's Pizza

Joe's Pizza

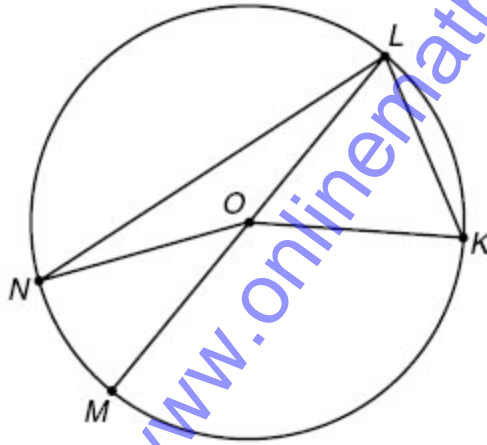What portion of the pizza did Frank and Joe eat altogether?

(a) 3/8   (c) 7/8

(b) 7/4   (d) 13/8

37. A circle with center at point O is shown below.

Which line segment is 2 times the length of radius OK?

(a) Segment LN

(c) Segment LK

(b) Segment LM

(d) Segment ON

38. Josie's horse eats about 2 bales of hay every 5 days. About how many bales of hay does Josie's horse eat in 31 days?

(a) 8

(c) 16

(b) 12

(d) 78

39. Jade is 3 years older than Steven, and Steven is 5 years younger than Andrew, who is 15 years old. Which table could be used to find Jade's age?

(a)

Ages

Name	Age (years)
Jade	7
Steven	8
Andrew	15

(c)

Ages

Name	Age (years)
Jade	15 − 5
Steven	15 − 5 + 3
Andrew	15

(b)

Ages

Name	Age (years)
Jade	15 − 5 + 3
Steven	15 − 5
Andrew	15

(d)

Ages

Name	Age (years)
Jade	3
Steven	5
Andrew	15

40. Lynn's garden is shaped like an isosceles trapezoid.
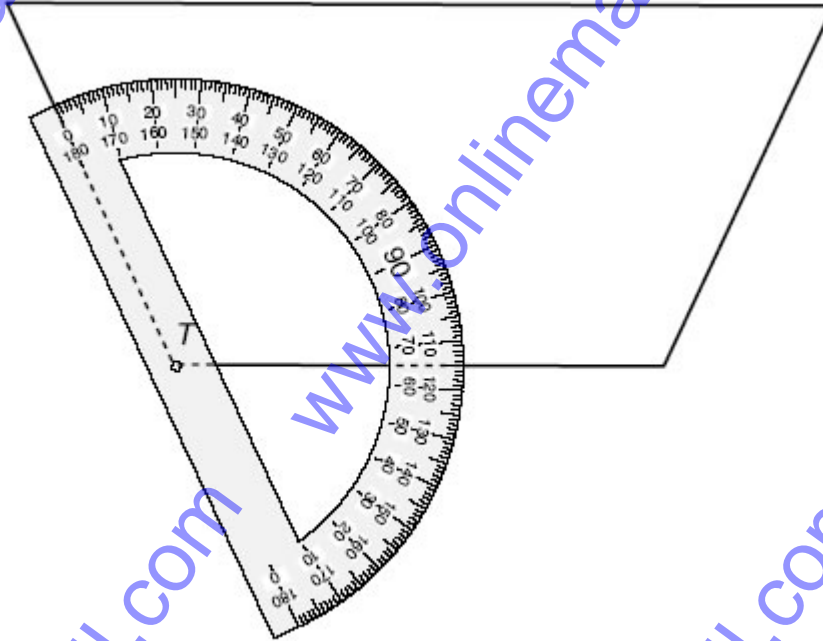
Find the measure of ∠T to the nearest degree.

(a) 65°   (c) 115°

(b) 75°   (d) 125°

41. Miss Caruso's car travels an average of 22 miles per gallon of gasoline. The gas tank holds 12 gallons. How would you find the number of miles Miss Caruso can drive on 1 full tank of gasoline?

(a) Add the car's average mileage in miles per gallon to the number of gallons the tank can hold

(b) Subtract the number of gallons the tank can hold from the car's average mileage in miles per gallon

(c) Multiply the car's average mileage in miles per gallon by the number of gallons the tank can hold

(d) Divide the car's average mileage in miles per gallon by the number of gallons the tank can hold

42. Several middle school bands boarded buses after a marching competition. If there were 21 buses and about 47 band members on each bus, about how many band members were on the buses in all?
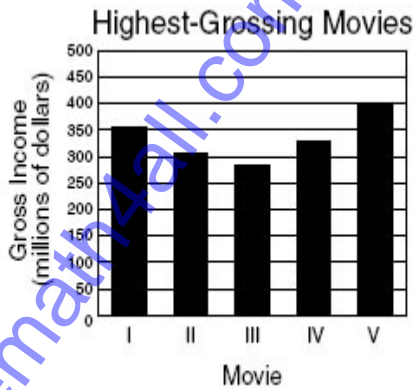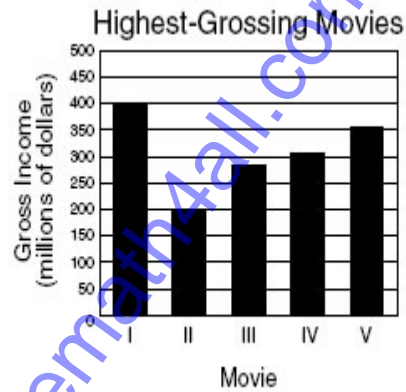
(a) 70

(c) 1,000

(b) 900

(d) 1250

43. The table shows the gross income of 5 of the highest-grossing U.S. movies from 1982 to 1996.
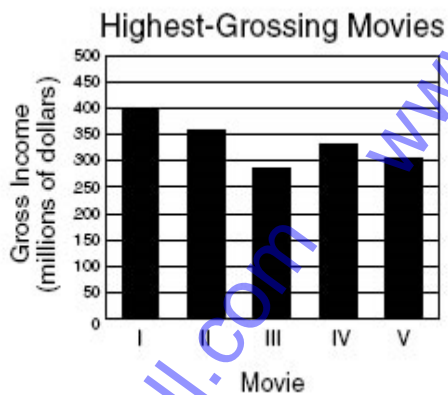
Highest-Grossing Movies

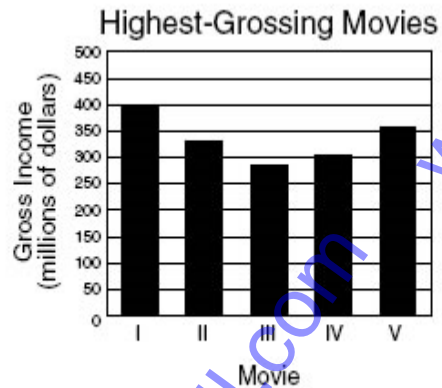| Movie	Gross Income (millions of dollars)
I	399.8
II	329.7
III	285.0
IV	306.2
V	356.8

(a)

(c)

(b)

(d)

44. Look at the shapes below.

Which statement best describes these shapes?

(a) They all appear to be regular polygons.

(b) They all have an even number of sides.

(c) They all have an even number of angles.

(d) They all contain only right angles.

45. At Sandra's school there is 1 teacher for every 15 students. There are 630 students at the school. Which proportion can be used to find x, the number of teachers?
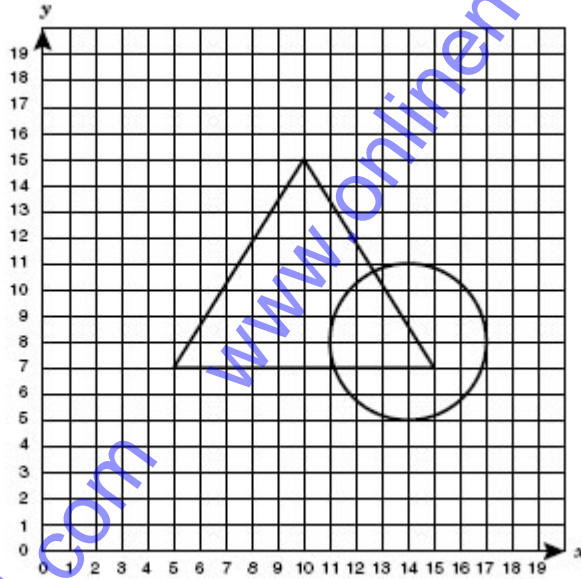
(a) $\dfrac{x}{15} = \dfrac{1}{630}$

(c) $\dfrac{1}{15} = \dfrac{x}{630}$

(b) $\dfrac{15}{1} = \dfrac{x}{630}$

(d) $\dfrac{x}{1} = \dfrac{15}{615}$

46. Which ordered pair represents a point located inside both the triangle and the circle?

(a) (8, 4)   (c) (14,8)

(b) (8, 10)   (d) (15,9)

47. A teacher has 32 students in her class. She wants to put the students into groups so that each group has the same number of students. Which of the following does NOT represent the number of students she could put into groups?.

(a) 4   (c) 8

(b) 10   (d) 16

48. Sally wrote two number patterns, as shown below.

$$\text{Set } \mathbf{R} = \{2, 4, 6, 8, 10, \ldots\}$$

$$\text{Set } \mathrm{T} = \{4, 8, 12, 16, 20, \ldots\}$$

If these patterns continue, which of the following numbers would appear in both Set R and Set T?

(a) 46   (c) 52

(b) 30   (d) 70

49. Which of the following statements about angle measures is true?

(a) An angle that measures 90° is a straight angle.

(b) An angle that measures 25° is an obtuse angle.

(c) An angle that measures 180° is a right angle.

(d) An angle that measures 88° is an acute angle.

50. Martha gives her plants a total of 2,000 milliliters of water each day. What is the total volume of water in liters that she gives her plants over 3 weeks?

(a) 2 L   (c) 42L

(b) 6L   (d) 60L

Answers:

1. b   2. b   3. a   4. b   5. b   6. a

7. b   8. c   9. d   10. b   11. a   12. d

13. b   14. b   15. d   16. c   17. d   18. c

19. b   20. b   21. c   22. c   23. a   24. d

25. c   26. a   27. b   28. a   29. b   30. b

31. b   32. b   33. d   34. b   35. a   36. d

37. b   38. b   39. b   40. c   41. c   42. c

43. d   44. a   45. c   46. c   47. b   48. c

49. d   50. c