1 **Which shows 833,000 written in scientific notation?**

A 8.33×10^3

B 8.33×10^4

C 8.33×10^5

D 8.33×10^6

CSM00333

2 **The length of a room is 5.048×10^2 cm. Which number is equivalent to this length?**

A 0.005048 cm

B 0.05048 cm

C 504.8 cm

D 504,800 cm

CSM21071

3 $\left(\frac{2}{3}\right)^4 =$

A $\frac{8}{81}$

B $\frac{16}{81}$

C $\frac{8}{3}$

D $\frac{16}{3}$

CSM10434

4 **Roberto paid $43.08 for 3 CDs. All 3 CDs were the same price. How much did each CD cost?**

A $11.36

B $14.36

C $40.08

D $46.08

CSM10189

5 **Dacia made a snack mix using the ingredients listed below.**

$1\frac{1}{4}$ cups granola	$\frac{3}{4}$ cup peanuts
$\frac{1}{2}$ cup raisins	$\frac{1}{4}$ cup chocolate chips

What is the total amount of all four ingredients?

A $1\frac{3}{4}$ cups

B $2\frac{1}{4}$ cups

C $2\frac{1}{2}$ cups

D $2\frac{3}{4}$ cups

CSM10210

6 $\frac{3}{4} \times 3 =$

A $\frac{6}{12}$

B $\frac{9}{12}$

C $\frac{6}{4}$

D $\frac{9}{4}$

CSM01930

7 Which of the following is equivalent to $\frac{5}{2}$?

A 2.25

B 2.5

C 5.2

D 5.25

CSM01854

8 Tasha is buying a CD that is regularly $12.99 and is on sale for $\frac{1}{4}$ off. Which expression can she use to estimate the discount on the CD?

A $0.0025 \times \$13$

B $0.04 \times \$13$

C $0.25 \times \$13$

D $0.40 \times \$13$

CSM10148

9 Which is an irrational number?

A $\sqrt{5}$

B $\sqrt{9}$

C -1

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

CSM00335

10 Which fraction is the same as 3.08?

A $\frac{56}{25}$

B $\frac{77}{25}$

C $\frac{19}{5}$

D $\frac{32}{5}$

CSM10161

11 **A sweater originally cost $37.50. Last week, Moesha bought it at 20% off.**

How much was deducted from the original price?

A $7.50

B $17.50

C $20.00

D $30.00

CSM00518

12 **Jason bought a jacket on sale for 50% off the original price and another 25% off the discounted price. If the jacket originally cost $88, what was the final sale price that Jason paid for the jacket?**

A $22

B $33

C $44

D $66

CSM01397

13 **Marl borrowed $200 at 12% simple interest for one year. If he makes no payments that year, how much interest will he owe at the end of the year?**

A $6.00

B $12.00

C $22.40

D $24.00

CSM02311

14 **Tamika works in a shoe store and is paid a 12% commission on her sales. In January her sales total was $3740. To the nearest dollar, how much did Tamika earn in commission for January?**

A $312

B $449

C $3291

D $4189

CSM11074

15 **Stuart is buying a pair of jeans that regularly cost $40. They are on sale for 20% off. If the tax rate is 8%, what is the sale price of the jeans including tax?**

A $21.60

B $34.56

C $42.34

D $44.16

CSM11608

16 **A calculator that is regularly priced $20 is on sale for 40% off. What is the sale price of the calculator?**

A $8

B $12

C $15

D $16

CSM21003

17 **The percentage discount at a store is determined using the table below.**

Sale Discounts

Total Purchases	Discount
less than $50	25%
$50 to $100	30%
over $100	35%

Shamika bought 3 skirts that cost $25 each before the discount. What was her total after the discount?

A $45.00

B $48.75

C $52.50

D $56.25

CSM21590

18 **Which of the following has the same value as $5^6 \times 5^{-2}$?**

A 5^{-12}

B 5^{-3}

C 5^4

D 5^8

CSM10165

19 $(jk)^{-5}(jk)^3 =$

A $(jk)^{-2}$

B $(jk)^{-8}$

C $(2jk)^{-2}$

D $(2jk)^{-8}$

CSM21591

20 **Which of the following shows the next step using the least common denominator to simplify $\frac{7}{8} - \frac{5}{6}$?**

A $\left(\frac{7}{8} \times \frac{3}{3}\right) - \left(\frac{5}{6} \times \frac{4}{4}\right)$

B $\left(\frac{7}{8} \times \frac{4}{4}\right) - \left(\frac{5}{6} \times \frac{3}{3}\right)$

C $\left(\frac{7}{8} \times \frac{5}{5}\right) - \left(\frac{5}{6} \times \frac{7}{7}\right)$

D $\left(\frac{7}{8} \times \frac{7}{7}\right) - \left(\frac{5}{6} \times \frac{5}{5}\right)$

CSM20890

21 $\dfrac{4^2 \cdot 3^5 \cdot 2^4}{4^3 \cdot 3^5 \cdot 2^2} =$

A $\frac{4}{2}$

B $\frac{3}{2}$

C 1

D $\frac{1}{2}$

CSM02336

22 Which expression is equivalent to $7^5 \times 7^{10}$?

A 7^{15}

B 7^{50}

C 49^{15}

D 49^{50}

CSM21010

23 Which value is equivalent to $\dfrac{3^{10}}{3^2}$?

A 5

B 8

C 3^5

D 3^8

CSM11046

24 $\sqrt{225} =$

A 15

B 25

C 35

D 45

CSM01839

25 If $x = 100$, what is the value of $4\sqrt{x}$?

A 20

B 40

C 100

D 200

CSM21141

26 $|9-5| - |6-8| =$

A –6

B –2

C 2

D 6

CSM01413

27 Which expression has the *smallest* value?

A $|-19|$

B $|-34|$

C $|11|$

D $|47|$

CSM10167

28 If the values of the expressions below are plotted on a number line, which expression would be closest to five?

A $|-4|$

B $|-18|$

C $|7|$

D $|16|$

CSM10168

29 **The sum of a number (n) and 14 is 72. Which equation shows this relationship?**

A $14 + n = 72$

B $72n = 14$

C $14 - n = 72$

D $72 + n = 14$

CSM00858

30 **If $x = 4$ and $y = 3$, then $xy - 2x =$**

A 4

B 6

C 19

D 40

CSM01923

31 **If $m = 3$ and $n = 5$, what is the value of $4m + mn$?**

A 180

B 27

C 20

D 15

CSM00340

32 **Which operation will change the value of any nonzero number?**

A adding zero

B multiplying by zero

C multiplying by one

D dividing by one

CSM01943

33 **Which property is used in the equation below?**

$$12(x + 4) = 12x + 48$$

A Associative Property of Addition

B Commutative Property of Addition

C Distributive Property

D Reflexive Property

CSM01431

34 **Which expression is equivalent to $3x - 3y$?**

A $3xy$

B $3(x - y)$

C $3x - y$

D $x - 3y$

CSM00846

35 **Which of the following equations illustrates the inverse property of multiplication?**

A $5 \times \frac{1}{5} = 1$

B $5 \times 1 = 5$

C $5 \times 0 = 0$

D $5 \times 5 = 25$

CSM21604

36 **Which equation shows the distributive property?**

A $4(3 + 6) = 12 + 24$

B $(4 + 3) + 6 = 6 + (4 + 3)$

C $(12 + 4) + 0 = 12 + 4$

D $(12 + 4) + 6 = 12 + (4 + 6)$

CSM10912

37 **Which expression is the result of applying the distributive property to $8 \times (100 + 5)$?**

A 8×105

B 8×140

C $800 + 5$

D $800 + 40$

CSM21016

38 **Which of the following is an example of an inequality?**

A $3n - 6$

B $4n > 9$

C $2 = n - 1$

D $5 + 0 = 5$

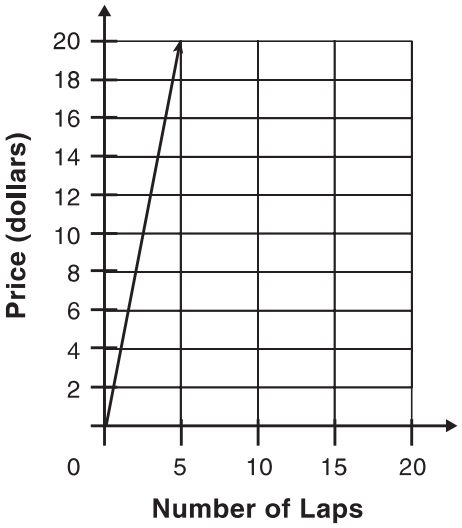
CSM01848

39 **The table below shows the charges for renting and racing a go-cart.**

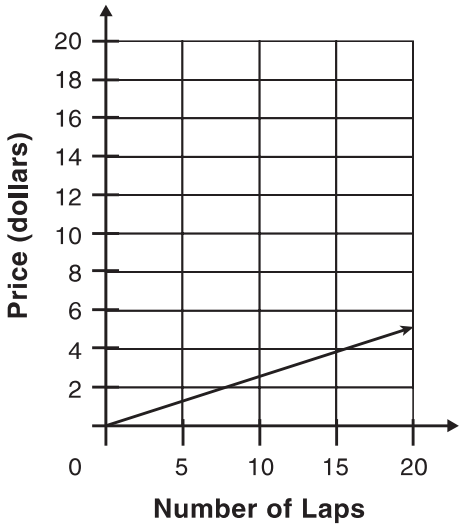
Grand Prix Go-Carts

Number of Laps	0	1	2	3	4	5
Price (dollars)	5	8	11	14	17	20

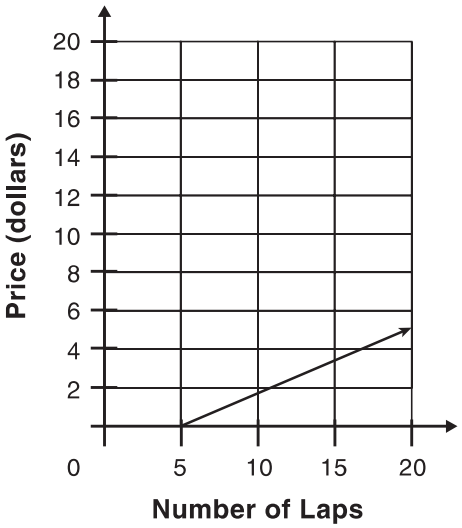
Which graph *best* represents these prices?



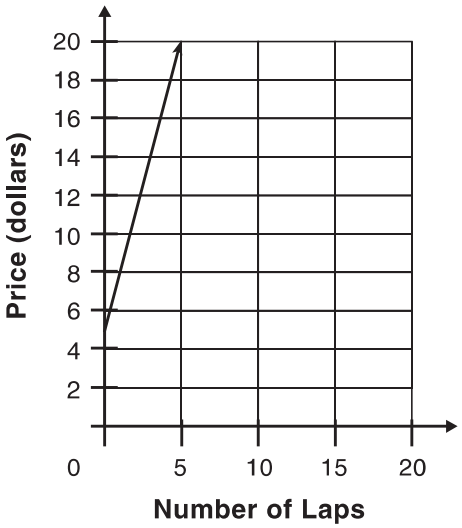
A



C



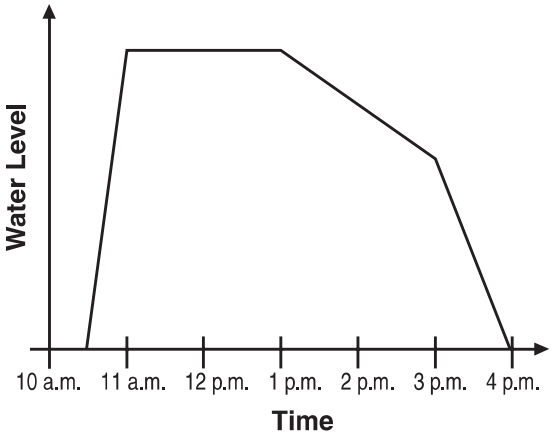
B



D

CSM10906

40 **Wading Pool**



Which statement *best* describes the water level of the pool from 2 p.m. to 3 p.m.?

A The pool is empty.

B The water level is constant.

C The water level is increasing.

D The water level is decreasing.

CSM21146

---

41 **Which expression below has the same value as x^3?**

A $3x$

B $x \div 3$

C $x \cdot x \cdot x$

D $3x \cdot 3x \cdot 3x$

CSM10175

---

42 **Which expression is equivalent to $\frac{8a^6}{2a^3}$?**

A $6a^2$

B $6a^3$

C $4a^2$

D $4a^3$

CSM10176

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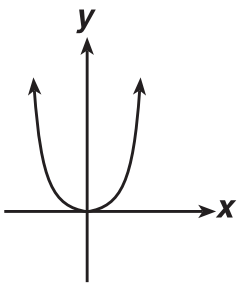
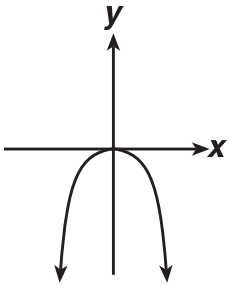
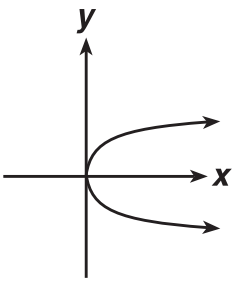
43 **Which graph shows $y = -x^2$?**



A



C



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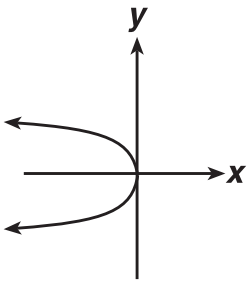
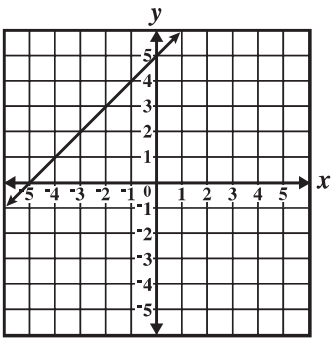


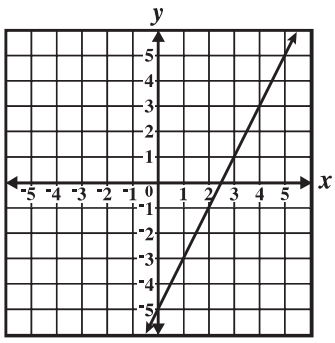
D

CSM00878

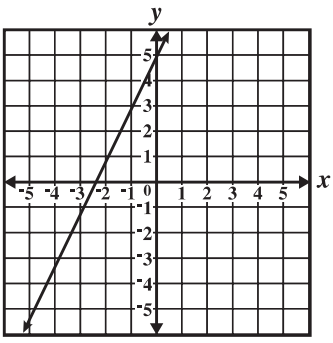
44 Which *best* represents the graph of $y = 2x - 5$?



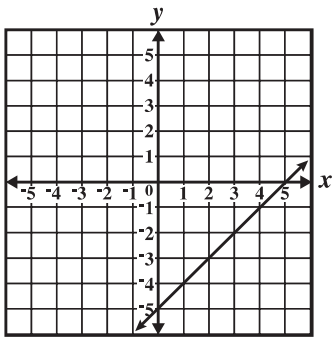
A



C



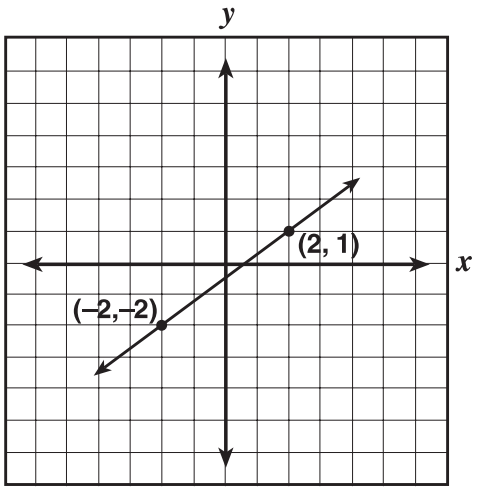
B



D

CSM00305

45 What is the slope of this line?



A $\frac{1}{2}$

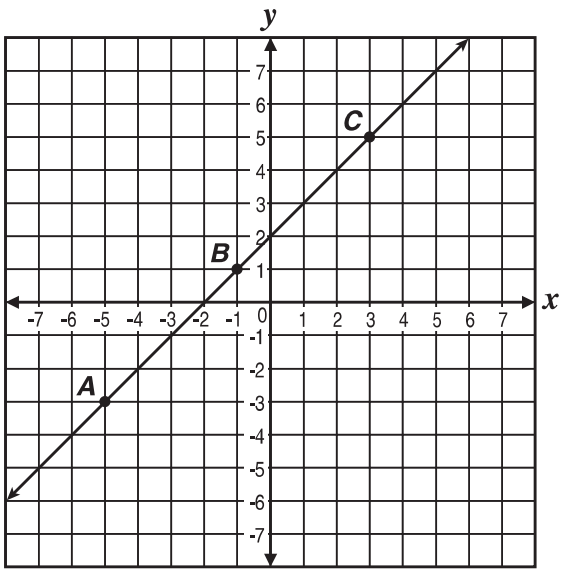
B $\frac{3}{4}$

C 1

D $\frac{4}{3}$

CSM00849

46 **Which statement is true about the slope of line $\overleftrightarrow{AC}$?**



A The slope is the ratio of the x- and y-intercepts.

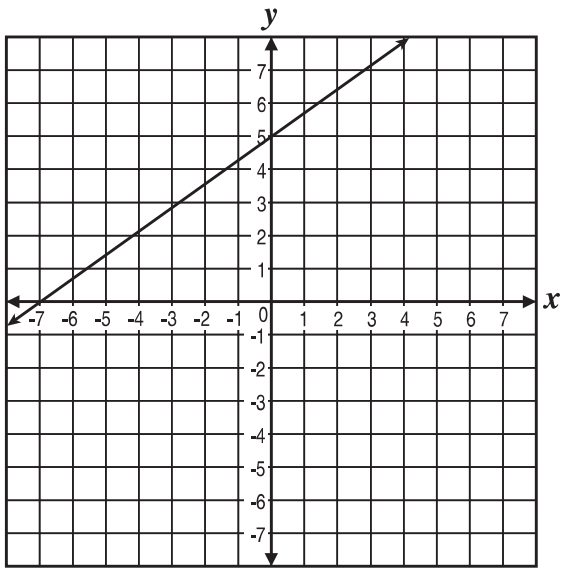
B The slope is the same between any two points on the line.

C The slope between point A and point B is greater than the slope between point B and point C.

D The slope between point A and point C is greater than the slope between point A and point B.

CSM21222

47 **What is the slope of the line?**



A -7

B $-\frac{5}{7}$

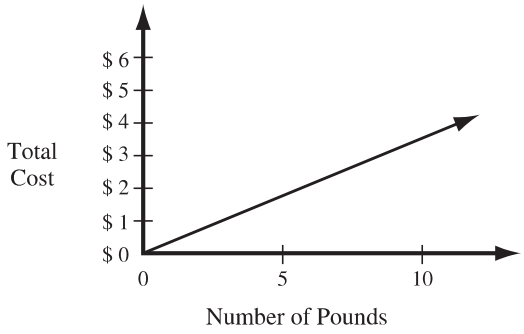
C $\frac{5}{7}$

D 5

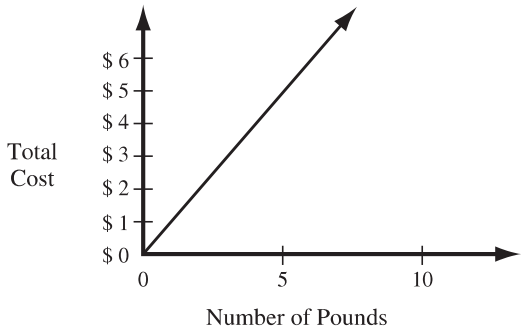
CSM21221

48 **Bananas are on sale at the price of 3 pounds for $1.00. Which graph shows the relationship between the number of pounds of bananas bought and the total cost?**

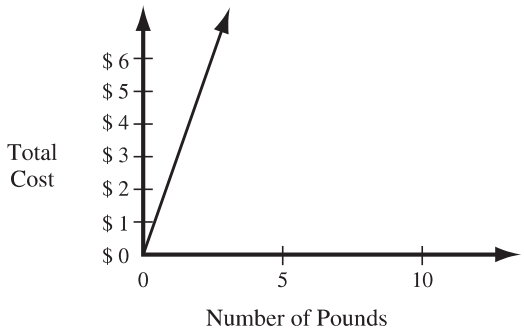
A



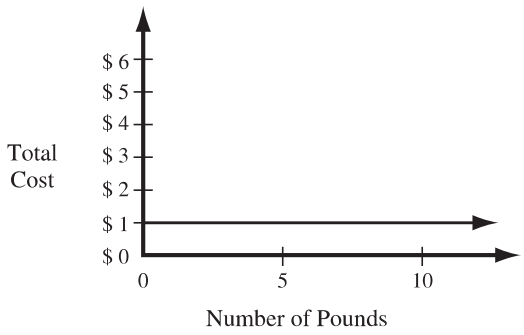
B



C



D



CSM00323

49 **What value of x makes the equation below true?**

$$\frac{x}{9} + 6 = 8$$

A 2

B 18

C 66

D 126

7A041507

50 **What is the solution set to the inequality $6z + 5 > 35$?**

A $\{z : z < 5\}$

B $\{z : z < 24\}$

C $\{z : z > 5\}$

D $\{z : z > 24\}$

7A041304

51 **What is the value of x if $-3x + 2 = -7$?**

A $x = -6$

B $x = -3$

C $x = 3$

D $x = 6$

CSM01932

52 **Joan needs $60 for a class trip. She has $32. She can earn $4 an hour mowing lawns. If the equation shows this relationship, how many hours must Joan work to have the money she needs?**

$$4h + 32 = 60$$

A 7 hours

B 17 hours

C 23 hours

D 28 hours

CSM00529

53 **What value of x satisfies the equation $4x + 2 = 22$?**

A 3.5

B 5.0

C 6.0

D 7.5

CSM21766

54 **A duck flew at 18 miles per hour for 3 hours, then at 15 miles per hour for 2 hours. How far did the duck fly in all?**

A 69 miles

B 75 miles

C 81 miles

D 84 miles

CSM01942

55 **Juanita earns $36 for 3 hours of work. At that rate, how long would she have to work to earn $720?**

A 12 hours

B 20 hours

C 60 hours

D 140 hours

CSM02316

56 **The distance a spring stretches varies directly with the force applied to it. If a 7-pound weight stretches a spring a distance of 24.5 inches, how far will the spring stretch if a 12-pound weight is applied?**

A 3.4 inches

B 19.5 inches

C 42 inches

D 294 inches

CSM10902

57 **Marisa's car gets an average of 28 miles per gallon of gas. She plans to drive 200 miles today and 220 miles tomorrow. How many gallons of gas should she expect to use in all?**

A 15 gallons

B 28 gallons

C 56 gallons

D 67 gallons

CSM01415

58 **Mr. Callaway needs to purchase enough grass seed to cover a 3000-square-foot lawn and a 4200-square-foot lawn. If 40 ounces of grass seed will seed a 2400-square-foot lawn, how many ounces does he need to seed both lawns?**

A 20

B 30

C 120

D 180

CSM10901

---

59 **Mr. Ogata drove 276 miles from his house to Los Angeles at an average speed of 62 miles per hour. His trip home took 6.5 hours. How did his speed on the way home compare to his speed on the way to Los Angeles?**

A It was about 2 miles per hour faster.

B It was about 2 miles per hour slower.

C It was about 20 miles per hour faster.

D It was about 20 miles per hour slower.

CSM21109

---

60 **How many millimeters are in 20 centimeters?**

A 0.02 millimeters

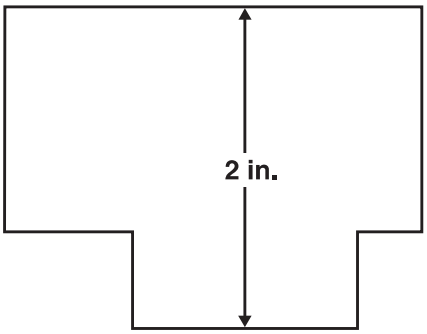
B 0.2 millimeters

C 200 millimeters

D 20,000 millimeters

CSM01858

61 **Mr. Craig made a scale drawing of his office.**



$\frac{1}{2}$ inch = 3 feet

The width of the scale drawing of the office is 2 inches. What is the actual width, in feet, of Mr. Craig's office?

A 3

B 6

C 9

D 12

CSM30056

62 **The chart below describes the speed of four desktop printers.**

Printer	Description
Roboprint	Prints 2 pages per second
Voltronn	Prints 1 page every 2 seconds
Vantek Plus	Prints 160 pages in 2 minutes
DLS Pro	Prints 100 pages per minute

Which printer is the *fastest*?

A Roboprint

B Voltronn

C Vantek Plus

D DLS Pro

CSM01946

63 **The atmosphere normally exerts a pressure of about 15 pounds per square inch on surfaces at sea level. About how much pressure does the atmosphere exert on a surface 30 square inches in area?**

A 2 pounds

B 15 pounds

C 45 pounds

D 450 pounds

CSM01373

64 **A utility company estimates that a power line repair job will take a total of 24 person-hours. If 3 workers are assigned to the job, how long will it take them to complete the job according to this estimate?**

A 8 hours

B 12 hours

C 27 hours

D 72 hours

CSM01432

65 **Citizens of Honduras use lempira for their money. In July 2002, the conversion rate for U.S. money to Honduran money was about 6 cents to 1 lempira. What dollar amount was equivalent to 300 lempiras?**

A $0.18

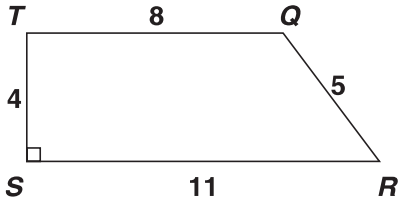
B $0.50

C $18.00

D $50.00

CSM10216

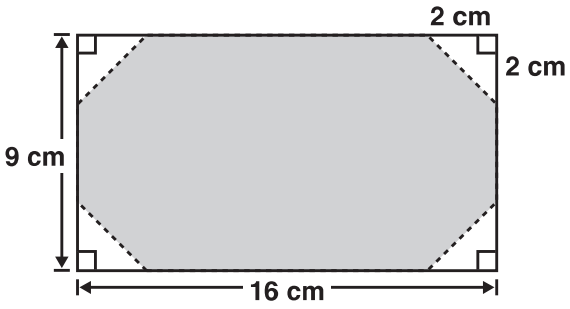
66 What is the area of trapezoid *QRST* in square units? $\left(A = \frac{1}{2}h(b_1 + b_2)\right)$



A 22
B 27
C 38
D 48

CSM10225

67 Cherie cut four congruent triangles off the corners of a rectangle to make an octagon, as shown below.

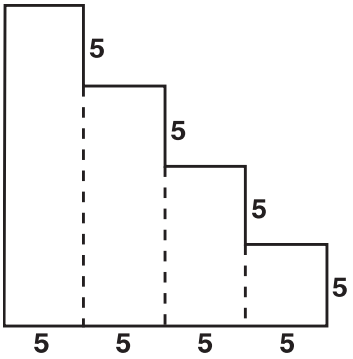


What is the area of the shaded octagon?

A 128 cm^2
B 136 cm^2
C 140 cm^2
D 152 cm^2

CSM00308

68 Elisa divided the staircase figure below into rectangles to help determine its area. All measurements are in millimeters.

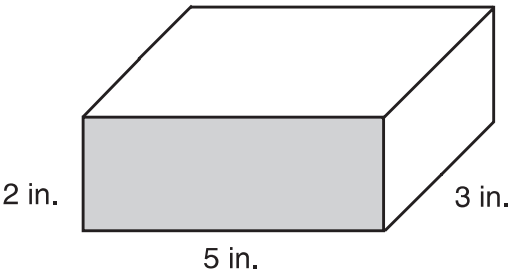


What is the total area of the figure?

A 150 mm^2
B 200 mm^2
C 250 mm^2
D 325 mm^2

CSM21056

69 What is the volume of the rectangular solid shown below?



A 10 cubic inches
B 25 cubic inches
C 30 cubic inches
D 62 cubic inches

CSM01901

70 **Jason is 72 inches tall. Which measurement does *not* describe Jason's height?**

A 6 feet

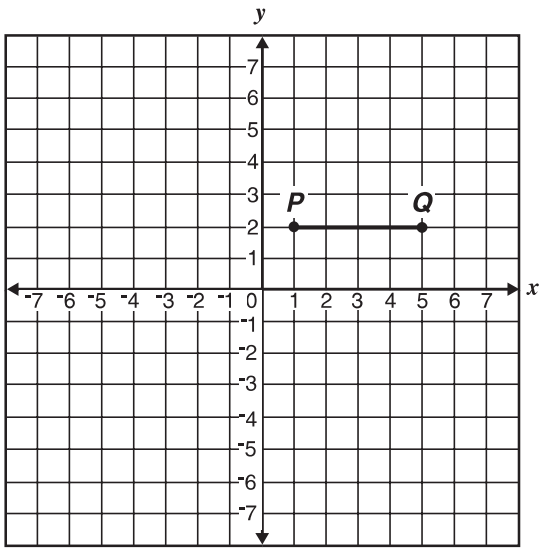
B 7 feet 2 inches

C 2 yards

D 182.88 centimeters

CSM01944

71 **Look at the coordinate grid below.**



Points *R* and *S* will be added to the grid to form rectangle *PQRS* with an area of 20 square units. Which ordered pairs could be the coordinates of points *R* and *S*?

A (5, −1) and (1, −1)

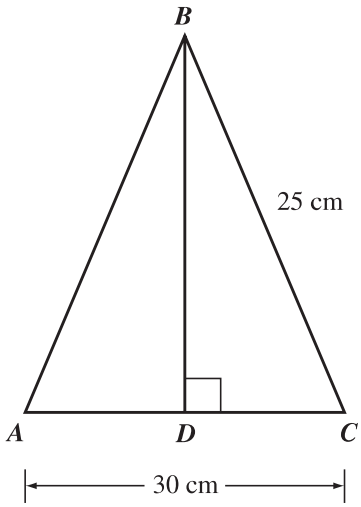
B (5, −2) and (1, −2)

C (5, −3) and (1, −3)

D (5, −4) and (1, −4)

CSM10186

72 **In the figure below, *D* is the midpoint of $\overline{AC}$, and $\overline{BD}$ is perpendicular to $\overline{AC}$.**



What is the length of $\overline{BD}$?

A 15 centimeters

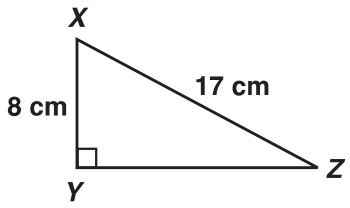
B 16 centimeters

C 18 centimeters

D 20 centimeters

CSM00330

73 **What is the length of $\overline{YZ}$?**



A 9 cm

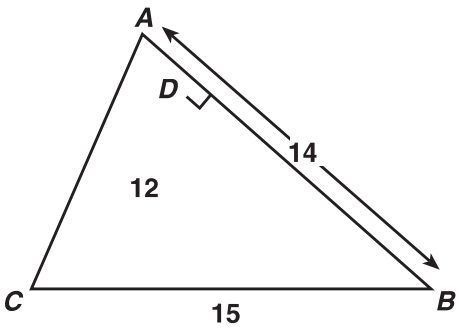
B 15 cm

C 19 cm

D 25 cm

CSM21066

74 **In the figure below, $\overline{AB}$ and $\overline{CD}$ are perpendicular.**



What is the perimeter of $\triangle ABC$?

A 13

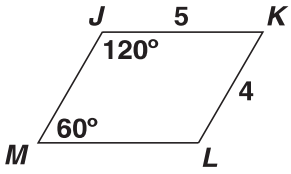
B 28

C 42

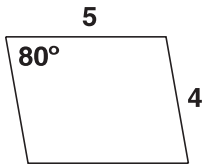
D 84

CSM00517

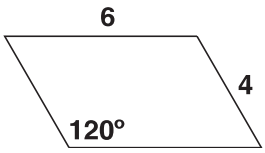
75 **Which parallelogram is congruent to parallelogram *JKLM*?**



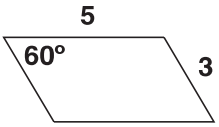
A



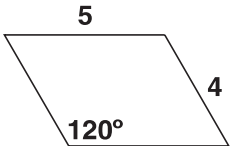
B



C

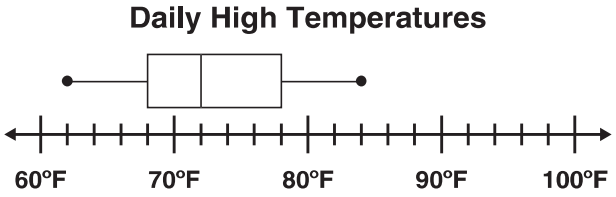


D



CSM10230

76 **The box-and-whisker plot below represents the daily high temperatures at a beach in April.**



What was the median daily high temperature?

A 68° F

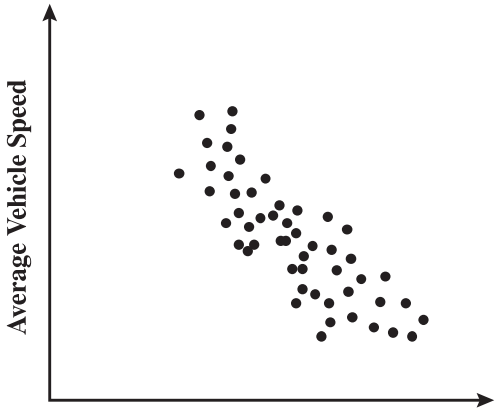
B 72° F

C 78° F

D 84° F

CSM10202

77 **The scatter plot below shows the average traffic volume and average vehicle speed on a certain freeway for 50 days in 1999.**



Which statement *best* describes the relationship between average traffic volume and average vehicle speed shown on the scatter plot?

A As traffic volume increases, vehicle speed increases.

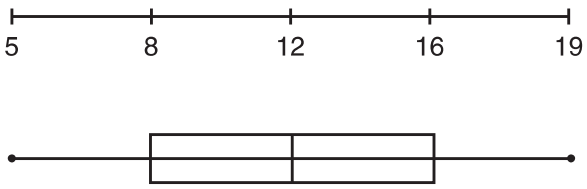
B As traffic volume increases, vehicle speed decreases.

C As traffic volume increases, vehicle speed increases at first, then decreases.

D As traffic volume increases, vehicle speed decreases at first, then increases.

CSN00041

78 **The following data represent the number of years different students in a certain group have gone to school together: 12, 5, 8, 16, 15, 9, 19. These data are shown on the box-and-whisker plot below.**



What is the median of the data?

A 5

B 8

C 12

D 16

CSN00082

79 **The table shows the number of turkey and ham sandwiches sold by Derby's Deli for several days in one week.**

Sandwiches Sold at Derby's Deli

Day	Turkey	Ham
Monday	7	9
Tuesday	13	11
Wednesday	8	8
Thursday	15	6
Friday	12	16

What is the difference between the median number of turkey sandwiches sold and the median number of ham sandwiches sold?

A 0

B 1

C 2

D 3

CSM21123

80 **Jared scored the following numbers of points in his last 7 basketball games: 8, 21, 7, 15, 9, 15, and 2. What is the median number of points scored by Jared in these 7 games?**

A 9

B 11

C 15

D 19

CSN00200