

34 Which algebraic equation best describes the total growth (T) in height of pine trees over a 3-year period, if g equals the rate of growth in centimeters per year?

A $T = 3g$

B $T = 3 + g$

C $T = \frac{g}{3}$

D $T = \frac{3}{g}$

CSM21694

35 If $x - 3 = 6$, what is the value of x ?

A 2

B 3

C 6

D 9

CSM10968

36 What is x if $3x = 84$?

A 20

B 21

C 26

D 28

CSM21693

37 In the equation $x + y = 4$, what is the value of x if $y = 2$?

A 2

B 4

C 6

D 8

CSM30458

38 A telephone company charges \$0.05 per minute for local calls and \$0.12 per minute for long-distance calls. Which expression gives the total cost in dollars for x minutes of local calls and y minutes of long-distance calls?

A $0.05x + 0.12y$

B $0.05x - 0.12y$

C $0.17(x + y)$

D $0.17xy$

CSM01299

39 The steps Quentin took to evaluate the expression $3m - 3 \div 3$ when $m = 8$ are shown below.

$3m - 3 \div 3$ when $m = 8$ $3 \times 8 = 24$ $24 - 3 = 21$ $21 \div 3 = 7$

What should Quentin have done differently in order to evaluate the expression?

A divided $(24 - 3)$ by (24×3)

B divided $(24 - 3)$ by $(24 - 3)$

C subtracted $(3 \div 3)$ from 24

D subtracted 3 from $(24 \div 3)$

CSM10804

40

$$8 + 8 \div 2 + 2 =$$

- A 4
- B 8
- C 10
- D 14

CSM02058

41

$$(5 + 2)[6 - (3 + 2)] =$$

- A 7
- B 8
- C 12
- D 13

CSM20789

42

How many inches are in $2\frac{1}{2}$ feet?

- A 24 inches
- B 25 inches
- C 29 inches
- D 30 inches

CSM01773

43

Sandra had a recipe that required $\frac{1}{3}$ pound of beef.

Pound Equivalent

1 pound = 453.6 grams

Using the table above, about how many grams of beef does she need?

- A 5
- B 151
- C 454
- D 1361

CSM30080

44

It takes a machine 12 minutes to fill 200 bottles of soda. At this rate, how many minutes will it take the machine to fill 500 bottles of soda?

- A 25 minutes
- B 28 minutes
- C 30 minutes
- D 40 minutes

CSM02066

45

Trish's resting heart rate is 50 beats per minute. For every minute she exercises, her heart rate increases 5 beats per minute. How long will it take her to reach a heart rate of 120 beats per minute?

- A 5 minutes
- B 14 minutes
- C 34 minutes
- D 70 minutes

CSM11181

46 Marcus spent \$3.25 to wash his car. If one quarter operates the car wash for 60 seconds, how long did it take him to wash his car?

- A 10 minutes
- B 13 minutes
- C 16 minutes
- D 32.5 minutes

CSM11180

47 A car gets 24 miles per gallon of gasoline (mi/gal). How many gallons of gasoline would the car need to travel 144 miles?

- A 6.5 gallons
- B 6 gallons
- C 5.5 gallons
- D 5 gallons

CSM02086

48 Sheila has been given 5 minutes to solve 20 arithmetic problems. What is the minimum rate Sheila can work in order to finish in time?

- A 1 problem per minute
- B 2 problems per minute
- C 4 problems per minute
- D 5 problems per minute

CSM20756

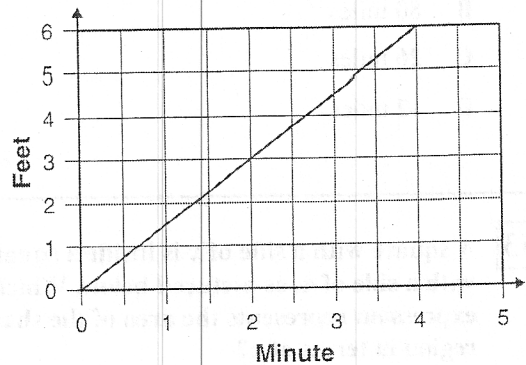
49 A water tank will hold 50 gallons. What flow rate, in gallons per second, is required to fill the tank in 20 seconds?

- A 0.4
- B 2.5
- C 16.7
- D 70

CSM21699

50 A snail is trying to get to the other side of a park. At what rate is the snail traveling?

Rate of Snail Movement



- A $\frac{1}{2}$ foot per minute
- B 1 foot per minute
- C $1\frac{1}{2}$ feet per minute
- D 2 feet per minute

CSM21501

51 Jerry read a 200-page book in 10 hours. At that rate, how long will it take him to read a 320-page book?

- A 16 hours
- B 18 hours
- C 24 hours
- D 32 hours

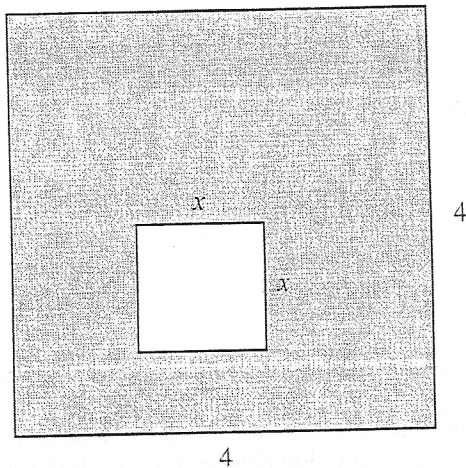
CSM01770

- 52 If a freight train travels at a speed of 20 miles per hour for 6 hours, how far will it travel?

- A 120 miles
- B 80 miles
- C 26 miles
- D 12 miles

CISM01854

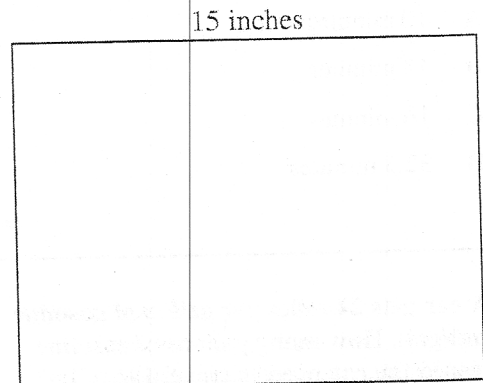
- 53 A square with a side of x is inside a square with a side of 4, as pictured below. Which expression represents the area of the shaded region in terms of x ?



- A $16 + x^2$
- B $16 - x^2$
- C $16 - 2x$
- D $16 - 4x$

CISM02302

- 54 The rectangle shown below has length 15 inches and perimeter P inches.



Which equation could be used to find the width of the rectangle?

- A $P = 15 + \frac{w}{2}$
- B $P = 15 - w$
- C $P = 30 + 2w$
- D $P = 30 - 2w$

CISM00286

- 55 An isosceles triangle has two sides with length x . The third side is $\frac{1}{2}$ of x . What is the perimeter?

- A $2\frac{1}{2}x$
B $3x$
C $4\frac{1}{2}x$
D $5x$

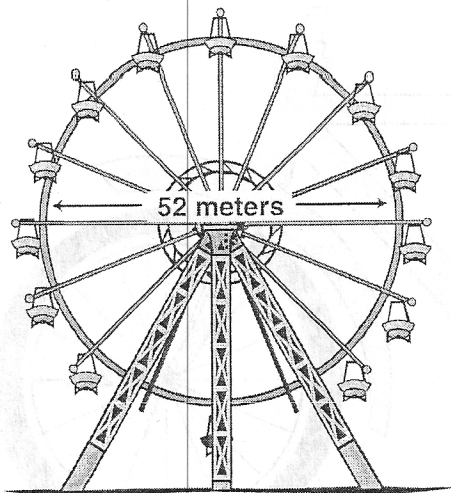
CSM10793

- 56 Which equation could be used to find the area in square inches of a circle with a radius of 8 inches?

- A $A = 4 \times \pi$
B $A = \pi \times 4^2$
C $A = 8 \times \pi$
D $A = \pi \times 8^2$

CSM01329

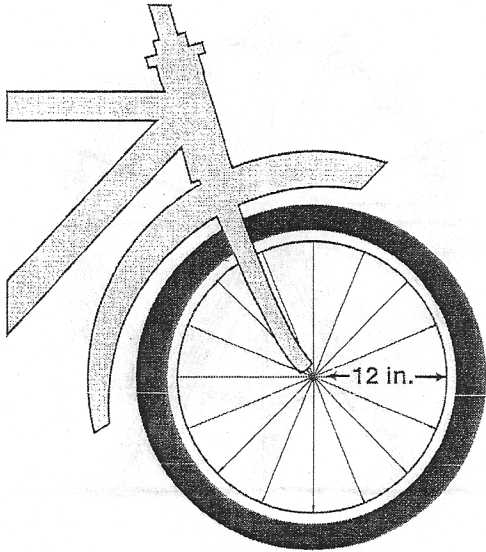
- 57 A Ferris wheel at the local fair has a diameter of 52 meters. Which expression can be used to find its circumference, C , in meters?



- A $C = 26 \times \pi$
B $C = 52 \times \pi$
C $C = 2 \times 52 \times \pi$
D $C = 26^2 \pi$

CSM10951

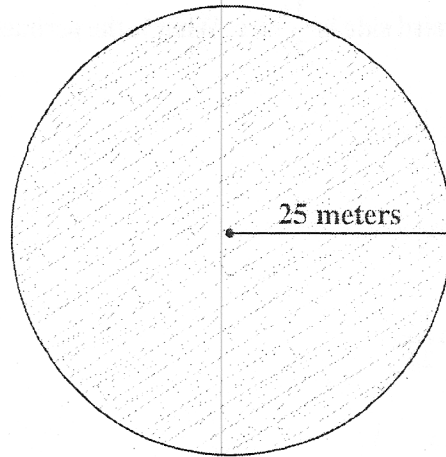
- 58 A bicycle wheel has an inside radius of 12 inches. Which expression could be used to find the inside circumference of this wheel?



- A $2 \times 6 \times \pi$
- B $2 \times 12 \times \pi$
- C $9 \times 9 \times \pi$
- D $12 \times 12 \times \pi$

CSM10950

- 59 This circular stage has a radius of 25 meters.



Which equation could be used to find the area of the stage in square meters?

- A $A = 25\pi$
- B $A = 50\pi$
- C $A = \pi \cdot 25^2$
- D $A = \pi \cdot 50^2$

CSM02059