2 Which table shows a proportional relationship between the number of calories and the number of cheese slices?

CALORIE INFORMATION

A

Number of Cheese Slices	Number of Calories
2	226
4	452
5	678
8	904

CALORIE INFORMATION

C

Number of Cheese Slices	Number of Calories
1	106
2	212
3	318
4	424

CALORIE INFORMATION

B

Number of Cheese Slices	Number of Calories
2	208
4	416
5	624
8	832

CALORIE INFORMATION

D

Number of Cheese Slices	Number of Calories
1	103
2	206
3	412
4	824

GO ON

3 At an event, each person can choose one main course and one dessert for a meal. The main course choices are chicken (C), steak (S), or fish (F). The choices for dessert are pudding (P) or a brownie (B). Which tree diagram represents all the different meal combinations being offered at the event?

A

Main Course	C		S	
Dessert	P	B	P	B

B

Main Course	C		S		F	
Dessert	P	B	P	B	P	B

C

Main Course	C		S		F	
Dessert	P	P	B	B	P	P

D

Main Course	C				S				F			
Dessert	P	B	S	F	P	B	C	F	P	B	C	S
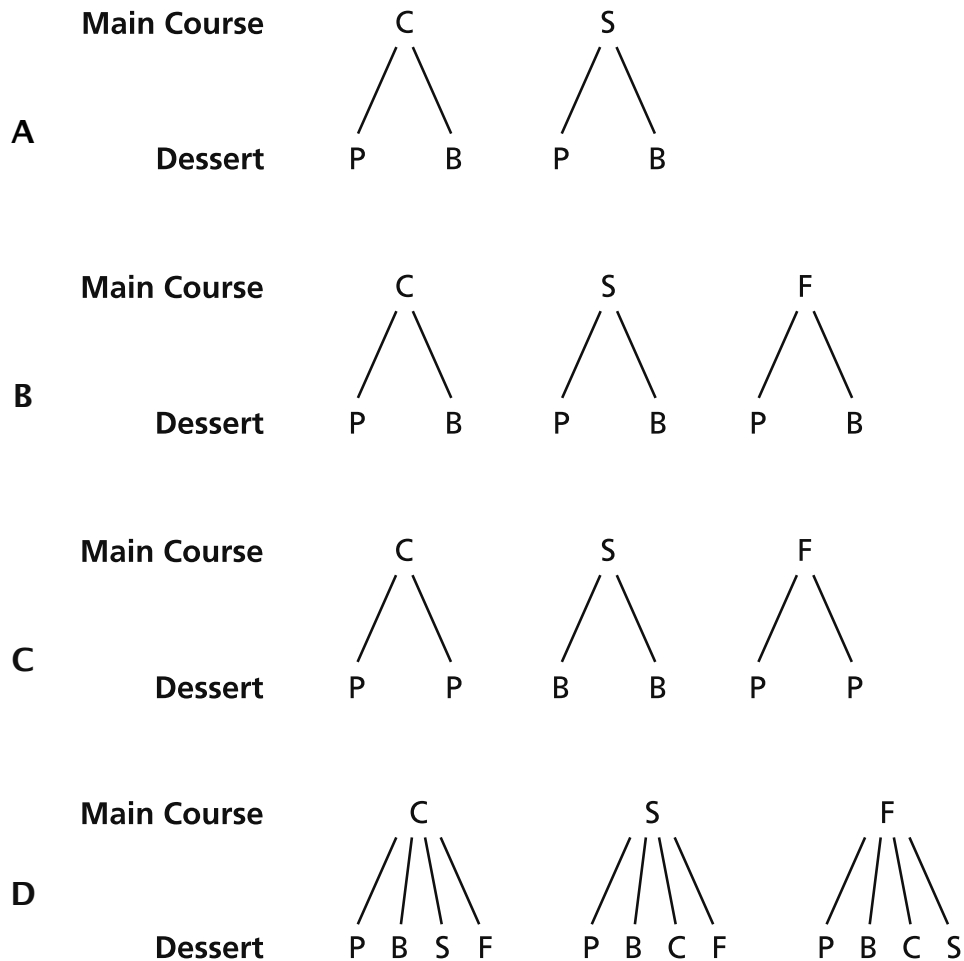
8 The table below shows the proportional relationship between the number of concert tickets purchased, t, and the total cost, c, of the tickets.

TICKET COSTS

Number of Tickets Purchased, t	Total Cost, c (dollars)
3	81.00
5	135.00
10	270.00

Which equation represents the relationship between t and c ?

A $c = 27t$

B $c = 54t$

C $c = 78t$

D $c = 81t$

GO ON

10 The diagram below shows a rectangular garden. The perimeter of the garden is 47 feet.
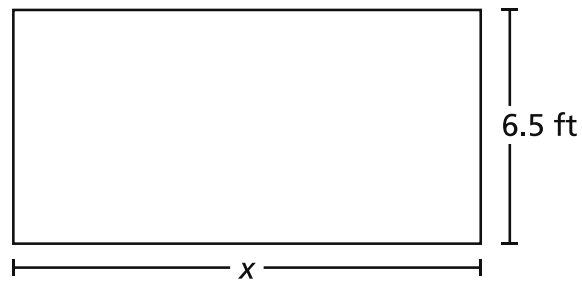
Which equation can be used to find the length, x, in feet, of the garden?

A $x + 13 = 47$

B $x + 6.5 = 47$

C $2x + 13 = 47$

D $2x + 6.5 = 47$
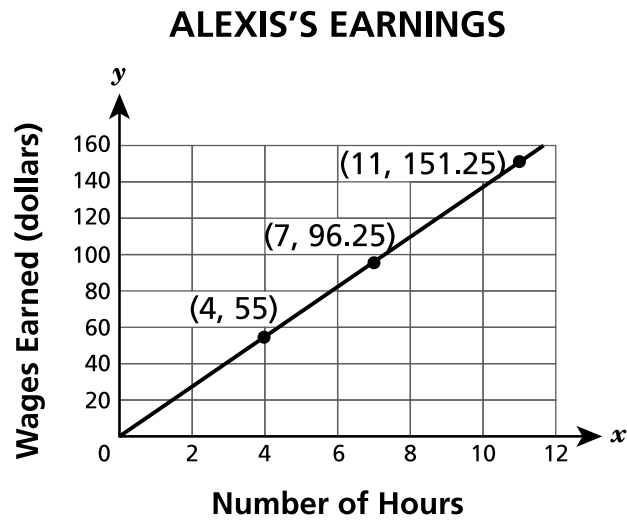
13 An incomplete equation is shown below.

$$-6.8 + 6.4 + \underline{\hspace{1cm}} = 0$$

Which expression, when placed in the blank, makes this equation true?

A $-4.3 + 4.7$

B $-6.5 + 6.7$

C $-4.3 + (-4.7)$

D $-6.5 + (-6.7)$

14 Alexis has a part-time job. The graph below shows the relationship between x, the number of hours worked, and y, the wages she earned.

ALEXIS'S EARNINGS

What is Alexis's wage earned per hour?

A $0.07

B $1.57

C $10.00

D $13.75

17 Which expression is equivalent to $(-0.3) + 1.5$?

    A $(-0.3) + (-1.5)$

    B $(-1.5) + (0.3)$

    C $1.5 - 0.3$

    D $0.3 - 1.5$

20 Which expression is equivalent to $4(3x - 1.25) - 2(3.5x + 2)$?

    A $-4x$

    B $-2x$

    C $5x - 1$

    D $5x - 9$

21 A sweater has an original price of t dollars. The expression $t - 0.10t$ can be used to determine the sale price, in dollars, of the sweater. Which expression can also be used to determine the sale price, in dollars, of the sweater?

    A $0.10t$

    B $0.90t$

    C $0.10t - t$

    D $0.90t - t$

GO ON

23 What is the product of $\left(-6\right)\left(-1\frac{1}{2}\right)$?

A -9

B $-6\frac{1}{2}$

C $6\frac{1}{2}$

D 9

25 A chair is on sale at a discounted price of $49.00. The regular price of the chair is $10.00 less than 2 times the discounted price. What is the difference between the total cost of 3 regular-priced chairs and 3 chairs at the discounted price?

A $39.00

B $88.00

C $117.00

D $147.00

27 A car travels 30 miles and uses $1\frac{2}{3}$ gallons of fuel. What is the unit rate, in miles per gallon, for the car?

A $\dfrac{1}{50}$

B $\dfrac{1}{18}$

C 18

D 50

GO ON

28 A school sold tickets to a musical for $8.95 per person. The musical had two performances as described below.

- On Friday night, 152 people attended.
- On Saturday night, 25% more people attended than Friday night.

What was the total amount of money earned from tickets sold on these two nights?

A $1,700.50

B $2,723.04

C $2,944.55

D $3,060.90

29 Shannon has $500.00 in her bank account. Each week, she withdraws $40.00 from the account. If she does not deposit or withdraw any additional money, what is the maximum number of weeks she can withdraw the same amount of money and maintain a balance of at least $200.00 ?

A 5

B 7

C 8

D 12

GO ON

32 A submarine at sea level descends at a constant rate. After descending for $1\frac{1}{3}$ hours, the submarine's depth is $2,700$ feet below sea level. At this rate, which value represents the depth, in feet, the submarine will have reached after descending for a total of $2\frac{1}{4}$ hours?

A 5,805.00

B 5,400.00

C 4,837.50

D 4,556.25

STOP

33 The graph below shows the prices for a number of containers of a type of yogurt.

YOGURT PRICES

Number of Containers
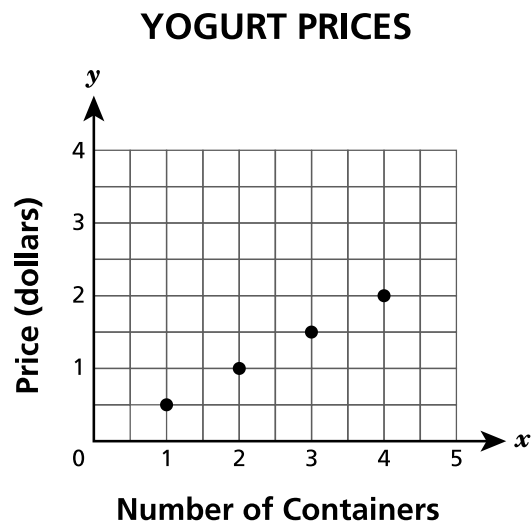
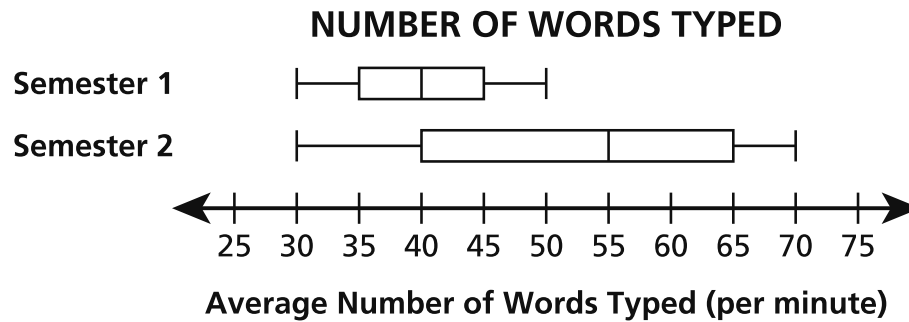Which statement describes the unit price per container of yogurt?

A   The unit price is $0.50.

B   The unit price is $1.00.

C   The unit price is $1.50.

D   The unit price is $2.00.

34 A student attends a fair. Admission to the fair is $12.00 and each ride ticket costs $5.50. The student can spend, at most, $46.00 on admission and ride tickets. Which inequality can be used to find the number of ride tickets, x, the student can buy?

A $12x + 5.5 \leq 46$

B $5.5x + 12 \leq 46$

C $5.5x + 12 \geq 46$

D $12x + 5.5 \geq 46$

GO ON

35 Students in a class are recording the number of words they can type per minute each semester during the school year. The box plots below show the results for two semesters.

NUMBER OF WORDS TYPED

Semester 1

Semester 2

25 30 35 40 45 50 55 60 65 70 75

Average Number of Words Typed (per minute)

What is the difference in the median number of words typed per minute from Semester 1 to Semester 2 ?

A 5

B 10

C 15

D 20

36 Jacob bought a phone for x dollars. One year later, the value of the phone decreased by 20%. Which expression represents the value of the phone after the decrease?

A $0.2x$

B $0.8x$

C $x - 0.2$

D $x - 0.8$

37 The temperature at $8:00$ a.m. was $-7°F$. At $3:00$ p.m., the temperature had risen to $8°F$. What was the change in temperature, in degrees Fahrenheit, from $8:00$ a.m. to $3:00$ p.m.?

A -15

B -1

C 1

D 15

38 Audrey is planning a party for 30 people. She wants to buy enough juice for each person to have exactly 2 servings of juice.

- Each bottle of juice has 5 servings.
- Each bottle of juice costs $4.89.

What is the total amount it will cost Audrey to buy the bottles of juice to serve her guests and have no juice left over?
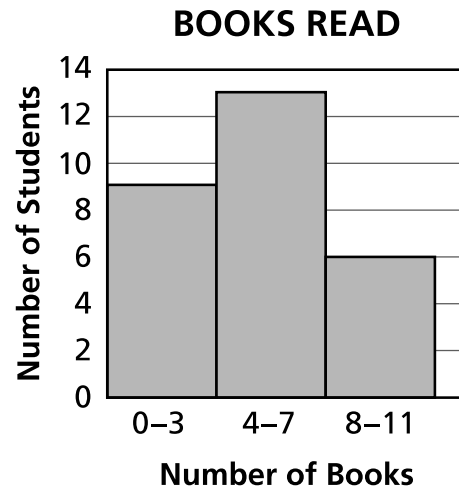
A $29.34

B $48.90

C $58.68

D $73.35

GO ON

39 **This question is worth 1 credit.**

The histogram below shows the results from a survey given to each student in a 6th grade class about the number of books they read over the summer.

BOOKS READ

Based on the histogram, how many students were surveyed?

Answer _____ students

40 **This question is worth 1 credit.**

An expression is shown below.

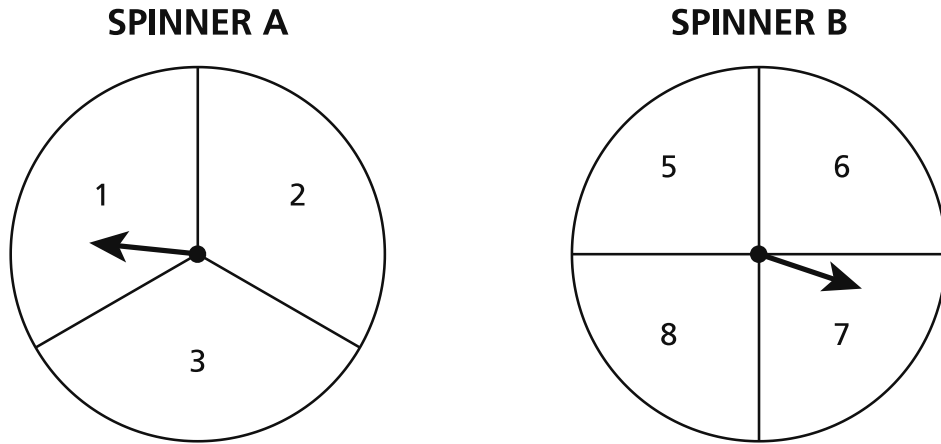$$\frac{0.5(4-6)}{0.2}$$

Determine the value of the expression.

Answer _____

41 This question is worth 1 credit.

Darius will spin the arrows on two spinners. Spinner A is divided into three equal sections and Spinner B is divided into four equal sections as shown below. Darius will spin each arrow one time.

SPINNER A

SPINNER B

What is the probability that the product of the two numbers that the arrows land on from Darius's spins will be an odd number?

Answer _____

GO ON

42 **This question is worth 2 credits.**

Diego, Kris, and Mary each paid the same amount for a movie ticket at a theater. Each person also bought a small popcorn for $6.50, including tax. The 3 friends spent a total of $54.00 on the movie tickets and popcorn. What was the price of each movie ticket?

Show your work.

Answer $ _____

43 This question is worth 2 credits.

Andrea had a gift card with a balance of $25.00. She makes a $25.00 purchase using the gift card. Would the gift card balance be zero dollars after this transaction?

Explain your answer.

_____

_____

_____

44 **This question is worth 2 credits.**

Ryan drinks $\frac{3}{8}$ gallon of water for every $1\frac{1}{2}$ hours of exercise. At this rate, how much

water, in gallons, does Ryan drink per hour of exercise?

Show your work.

Answer _____ gallon(s)

45 This question is worth 2 credits.

The table below shows the price, in dollars, of different numbers of cans of soda.

SODA PRICES

Number of Cans	Price (dollars)
2	5.50
4	11.00
8	22.00
10	27.50

Is the relationship between the price, in dollars, and the number of cans of soda proportional?

Explain how you determined your answer.

_____

_____

_____

46 This question is worth 2 credits.

An expression is shown below.

$$-5y + 3 - 6y + 10y - 1$$

Simplify the expression completely.

Show your work.

Answer _____

47 This question is worth 2 credits.

Jeffrey is painting a rectangular mural on his bedroom wall. He sketches his design on a piece of paper as described below.

- He uses the entire piece of paper for his design.
- The paper has a length of 8 inches and a width of 6 inches.
- The scale factor is 1 inch to 1.75 feet.

What is the actual area, in square feet, of the mural that Jeffrey will paint on his wall?

Show your work.

Answer _____ square feet

48 This question is worth 3 credits.

A store is offering discounts on two types of shirts.

- a 10% discount on short sleeve shirts with an original price of $40.00
- a 25% discount on long sleeve shirts with an original price of $50.00

How much will a customer spend, without tax, if they purchase one of each type of shirt?

Show your work.

Answer $ _____