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1) In Raphael's class there are 14 boys and 10 girls. Which of the following ratios are accurate? Select all that apply.

- ☐ The ratio of boys to girls is 14:10.
- ☐ The ratio of girls to boys is 7:5.
- ☐ The ratio of boys to girls is $\frac{7}{5}$.
- ☐ The ratio of girls to boys is $\frac{30}{42}$.
- ☐ The ratio of girls to total students is 7:12.

2) Rita wants to buy a sweater that was originally priced at $25.00. Today the sweater is on sale for 40% off the original price.

Part A

What is the sale price of the sweater?

$_____

Part B

Rita has a coupon for an additional 10% off the sale price. How much will Rita pay for the sweater before taxes?

$_____

3) Nicholas is driving his car at a constant rate of 55 miles per hour. Determine whether Nicholas could achieve the distances listed in the given times. Select Yes or No.

	Yes	No
165 miles in 3 hours	○	○
240 miles in 4 hours	○	○
330 miles in 6 hours	○	○
504 miles in 9 hours	○	○

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4) Kelly keeps track of her test scores as shown in the table.

Test	Number of Items	Number Correct
1	50	35
2	40	27
3	60	48
4	100	75

Drag the tiles to order Kelly's test scores from least percent correct (at the bottom) to greatest percent correct (at the top).

Test 4   **1)** —————————

Test 2   **2)** —————————

Test 1   **3)** —————————

Test 3   **4)** —————————

5) Makayla wants to buy a carton of juice. She could buy a 48-ounce container for $2.88 or a 64-ounce container for $3.52. Which container is the better buy? Justify your response.

6) Yolanda buys two types of flowering plants. She buys 36 geraniums and 63 marigolds. She wants to plant an equal number of flowers in each row of her garden. Each row will contain only one type of flowering plant.

Part A

Yolanda uses all the plants she bought in her garden. Determine the greatest number of flowering plants that could be in each row of the garden.

————————————— plants

Part B

How many rows of each type of flowering plant will be in Yolanda's garden?

————————————— rows of geraniums

————————————— rows of marigolds

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7) Determine whether each expression is equivalent to the sum 45 + 63. Select Yes or No.

	Yes	**No**
15(3 + 4)	○	○
9(5 + 7)	○	○
7(7 + 9)	○	○
3(21 + 15)	○	○

8) The table shows the elevations of several objects compared to sea level.

Object	**Elevation (ft)**
Scuba Diver	–75
Light in a Lighthouse	137
Shark	–48
Fish	–6
Top of Weather Buoy	10
Submarine	–182

Drag the tiles to order the objects from farthest away from sea level (at the bottom) to closest to sea level (at the top).

Submarine   **1)** _____

Top of Weather Buoy   **2)** _____

Light in a Lighthouse   **3)** _____

Fish   **4)** _____

Scuba Diver   **5)** _____

Shark   **6)** _____

9) A theater received $8,917 in ticket sales for one performance of a play. Tickets for preferred seats cost $45 each and regular seats cost $34 each. All of the theater's 75 preferred seats were sold out that evening. How many tickets were sold in all?

_____ tickets

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10) Point $K(3, -4)$ is plotted on a coordinate plane. Which of the following statements are true about point K? Select all that apply.

☐ It is located in Quadrant IV.

☐ It is a reflection of point $(-3, -4)$ over the x-axis.

☐ It has the same location as point $B(-4, 3)$.

☐ It is a reflection of point $(3, 4)$ over the y-axis.

☐ It is a reflection of the point $(-3, 4)$ over the x-axis and then over the y-axis.

11) Irfan is transferring the drawing of figure $ABCD$ to a coordinate plane. He plots point A at $(-2, -1)$, and point B at $(1, 3)$ on a coordinate plane. Graph the ordered pairs that show points C and D, and then connect the points to form Irfan's figure.
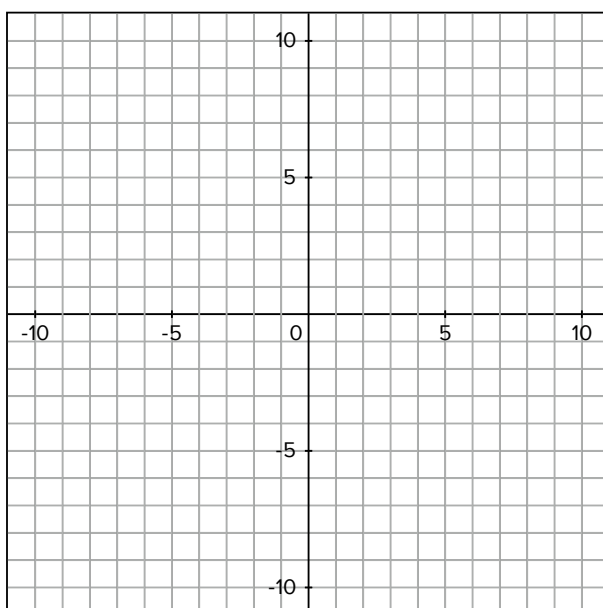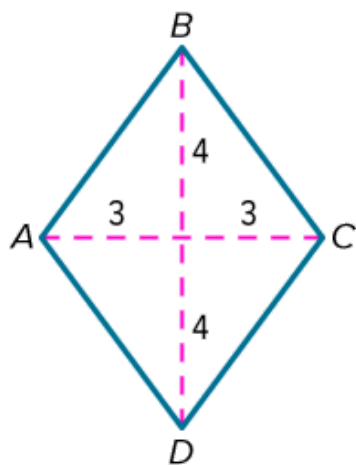
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12) The diagram shows the amount of fabric that Christine needs to make 1 tablecloth, including the fabric that will hang over the sides. The fabric costs $1.50 per square foot. Christine plans to make 1 tablecloth for each of the 4 seasons of the year. What is the total cost of the fabric that Christine needs for the tablecloths?

$2\frac{1}{2}$ ft

6 ft

$_____
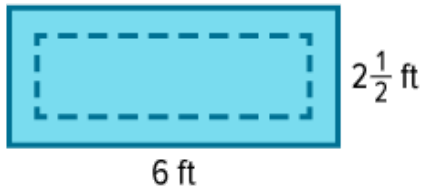
13) Fill in the blanks using the available answer choices.

Complete each expression using the Distributive Property.

$4(2x + 5) =$ _____ $x +$ _____
         (Blank 1)   (Blank 2)

$3(3x + 1) =$ _____ $x +$ _____
         (Blank 3)   (Blank 4)

$15x + 25 =$ _____ (_____ $x +$ _____)
        (Blank 5)   (Blank 6)   (Blank 7)

Blank 1 options	Blank 2 options	Blank 3 options	Blank 4 options
• 4	• 9	• 6	• 1
• 6	• 10	• 9	• 3
• 8	• 20	• 12	• 9

Blank 5 options	Blank 6 options	Blank 7 options
• 2	• 2	• 2
• 3	• 3	• 3
• 5	• 5	• 5

14A) Latoya has a 25-pound bag of potting soil. She puts 3 pounds of potting soil in each of f flowerpots. The amount of potting soil that remains can be represented by the expression $25 - 3f$.

Part A

Latoya puts soil in 7 flowerpots. How much potting soil remains?

_____ pounds

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14B) Part B

Latoya realizes that she actually has two 25-pound bags of potting soil. Write a new expression to represent the number of pounds of potting soil remaining after Latoya puts 3 pounds in each of f flowerpots.

15) A fruit stand makes a profit when $p > 38$, where p is the number of pounds of fruit sold. On which day(s) did the fruit stand make a profit? Select Profit or No Profit for each day.

Day	Amount of Fruit Sold (lb)
Monday	32
Tuesday	45
Wednesday	39
Thursday	44
Friday	38
Saturday	56

	Profit	No Profit
Monday	O	O
Tuesday	O	O
Wednesday	O	O
Thursday	O	O
Friday	O	O
Saturday	O	O

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16) Fill in the blanks using the available answer choices.

Evaluate the following powers.

$2^6 =$ _____
(Blank 1)

$6^2 =$ _____
(Blank 2)

$3^5 =$ _____
(Blank 3)

$5^3 =$ _____
(Blank 4)

Blank 1 options	Blank 2 options	Blank 3 options	Blank 4 options
• 8	• 8	• 9	• 9
• 12	• 12	• 15	• 15
• 36	• 36	• 125	• 125
• 64	• 64	• 243	• 243

17) Fill in the blanks using the available answer choices.

Select the correct term in each box to create an expression equivalent to $7x + 2x + 6y$.

_____ (_____ + _____)
(Blank 1)   (Blank 2)   (Blank 3)

Blank 1 options	Blank 2 options	Blank 3 options
• 2	• 2	• 2
• 3	• 3	• 3
• 3x	• 2x	• 2y
• 3y	• 3x	• 3y

18) In the last basketball game, Elena scored 2 more than one fourth of her team's total points. If the team scored 40 points, how many points did Elena score? Justify your answer.

19A) A hiker walks at an average rate of 2 miles per hour.

Part A

Write a multiplication equation to find how long it will take for the hiker to walk 11 miles. Let n represent the number of hours.

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19B) Part B

Solve the equation for n. How many hours does the hiker walk?

__ hours

20) Fill in the blanks using the available answer choices.

Monique has five weeks to save at least $80 for a ski trip. Let n represent the amount she has to save each week. Write and solve an inequality to find the amount of money Monique needs to save each week. Then interpret the solution in the context of the problem.

Inequality: _____ ≥ _____
(Blank 1)   (Blank 2)

Solution: $n \geq$ _____
(Blank 3)

Monique needs to save _____ _____ each week to have enough
(Blank 4)   (Blank 5)

money for the ski trip.

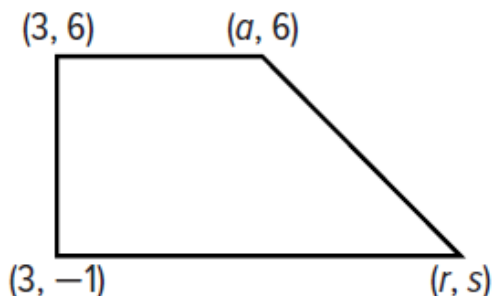| Blank 1 options	Blank 2 options	Blank 3 options	Blank 4 options
• n	• n	• 5	• at least
• 5n	• 5n	• 16	• at most
• 80	• 80	• 80	• no more than

Blank 5 options
- $5
- $16
- $80

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21) The diagram shows the coordinates of the vertices of a right trapezoid when it is drawn on a coordinate plane. Which statements are true about the figure? Select all that apply.

(3, 6)   (a, 6)

(3, −1)   (r, s)

☐ The length of the longest horizontal side is $r - 3$.
☐ The length of the vertical side is 5.
☐ $a = 3$
☐ $r > s$
☐ The length of the shortest horizontal side is $a - 6$.

22) Determine whether each set of dimensions represents a triangle with an area of 24 square units. Select Yes or No.

	Yes	No
base = 8 units, height = 12 units	○	○
base = 6 units, height = 8 units	○	○
base = 4 units, height = 6 units	○	○
base = 3 units, height = 4 units	○	○
base = 16 units, height = 3 units	○	○

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23) Evan fills the prism shown with $148\frac{1}{2}$ cubic inches of sand. What is the height of the top of the sand?
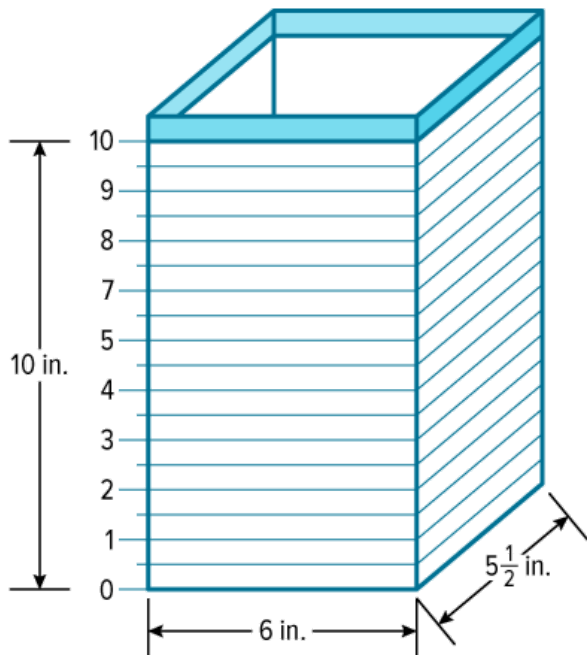

___ in.

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24) Benjamin needs to gather data about astronauts and space travel to write a report. Determine whether or not each question can be classified as a statistical question. Select Yes or No.

	Yes	No
How many astronauts have walked on the moon?	○	○
How many days did the missions stay on the moon?	○	○
How many times did Neil Armstrong travel into space?	○	○
How old were the astronauts when they traveled into space?	○	○

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25) The box plot shows some student test scores.
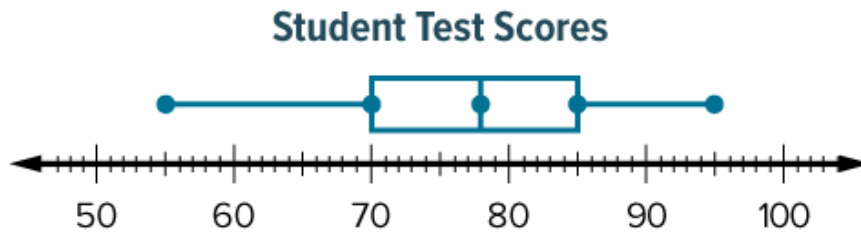
Which of the following statements are true about the test scores? Select all that apply.

☐ Half of the test scores are between 70 and 85.

☐ The greatest test score is 95.

☐ The mean test score is 78.

☐ The median test score is 78.

☐ The mode of the test scores is 85.

☐ There are more test scores between 55 and 70 than between 78 and 85.