B Quiz #23
Lessons 89–92

1. The surface area of a rectangular prism is 592 m^2. Two of the dimensions are 8 m and 10 cm. What is the measure of the other dimension?

2. The chart below shows the peak wind speed for each of four consecutive days. On which day was the peak wind speed the highest? What was the speed?

Day 1	Day 2	Day 3	Day 4
38 mph	120% of Day 1	¾ of Day 1	1.15 of Day 1

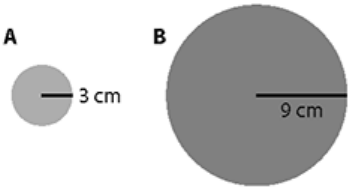
3. Factor this expression by dividing by the GCF first. $36g + 6j + 60$

4. Devon took a cab uptown to go shopping. The cab ride cost $48.50, and he added an 18% tip. How much did Devon pay the cab driver?

5. What is the probability of the spinner landing on a number other than 5? Express the probability as a fraction.

6. Solve. $6 + 6 \times 6 - 6 \div 6 = ?$

7. What is the combined area of circle A and circle B? Use 3.14 for π.



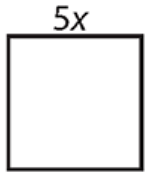
8. Write an expression in simplest form to show the perimeter of the square. Find the perimeter when $x = 8$ m.

9. Alana used $3\frac{1}{2}$ cup of beans to make $\frac{3}{4}$ of a container of bean salad. What amount of beans would it take to make a full container of salad? Write your answer as a mixed number.

10. Jacob bought 5 ice cream cones for $9.00. Write and solve an equation to find how much each cone cost.

11. Find the product. $12(-7)$

12. A zip-up or pull-over sweatshirt comes in red, gray, or black. How many choices are there? Use a tree diagram to show the sample space of sweatshirt styles and color choices.

1. 7.G.6	2. 7.EE.3
3. 7.EE.1	4. 7.RP.3
5. 7.SP.5  	6. 7.NS.3
7. 7.G.4	8. 7.EE.1 
9. 7.RP.1	10. 7.EE.4
11. 7.NS.2	12. 7.SP.8

B Quiz #24

Lessons 93–96

1. Simplify this complex fraction. $\frac{\frac{1}{2}}{\frac{3}{8}}$

2. Find the mean of "yes" votes from the three sample groups. Use the mean to estimate the number of voters who will vote yes on Issue 5. The voter population is 75,000.

Sample Group	Yes	No	Total
A	61	39	100
B	63	37	100
C	65	35	100

3. Simplify the expression. $7w - 6 - 2w + w - 12w + 4$

4. Solve. $60 - 7 \times 5 + 8 \div 4 = ?$

5. Solve for a. $9a - 15 = 12$

6. Four waiters equally shared a tip for a job well done. The tip was 20% of $1,200. How much did each waiter get?

7. Which of these sets of side lengths can be used to make a triangle?

8. Divide. Write the quotient in simplest form. $\frac{3}{4} \div -1\frac{2}{5} = ?$

9. Find the radius of a circle that has an area of 81π ft^2.

10. The price of a coat went from $38 to $26. What was the percent of decrease? Use the formula for finding the percent of decrease. Round to the nearest percent.

11. Simon has 2 number cubes. On a single roll, what is the probability that the numbers on the cubes will have a sum of less than 6? The table shows the sample space. Give $P(\text{sum} < 6)$.

12. Find the values of m and n.

1.

7.RP.1

2.

7.SP.2

3.

7.EE.1

4.

7.NS.3

5.

7.EE.4

6.

7.EE.3

7.

7.G.2

A) 7, 8, 20

B) 13, 6, 8

C) 12, 3, 6

D) 14, 6, 7

8.

7.NS.2

9.

7.G.4

10.

7.RP.3

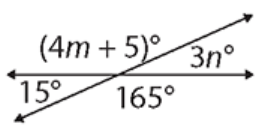
11.

7.SP.8

DICE	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

12.

7.G.5



B Quiz #25
Lessons 97–100

1. The data in the table is based on a simple random sample. What is the least common age range of citizens in the given population?

Sample Group	0–30	31–60	61 and older	Total
A	39	49	12	100
B	31	56	13	100
C	33	52	15	100

2. Izzy spent $24 on apps for her cell phone. She downloaded 12 apps that were all the same price, and was also charged $3.00 for a service fee. Write and solve an equation to find out how much each app cost.

3. Dinah invests $850 in a high-yield savings account. The account pays 3% simple interest annually. If she doesn't add or subtract any money, is it reasonable that Dinah will earn about $100 in simple interest in 4 years? Explain.

4. Find the circumference of a circle that has a diameter of 42 m.

5. Solve. $32 - 6 \div 3 \times 2 + 4 \times (-2) = ?$

6. An equilateral triangle has a perimeter of $4n + 12$ ft. Find the perimeter when $n = 6$.

7. The graph represents earnings from the sale of brownies at a bake sale. What is the meaning of point D on the graph? Of point A?

8. A cell phone provider charges $120 per month. There is a 15% discount for those who also subscribe to home phone service. What price do home phone subscribers pay for cell phone service?

9. Find the quotient. $234 \div (-9) = ?$

10. Find the values of r and s.

11. Use the scale to calculate the actual length of each wall, then find the perimeter and area of the actual room.

12. The data in the table is based on a systematic random sample of a population of 150,000. Estimate the number of citizens who own both a dog and a cat.

Sample Group	No Pets	Dogs Only	Cats Only	Dogs and Cats	Total
A	82	53	49	16	200

1.

7.SP.2

2.

7.EE.4

3.

7.EE.3

4.

7.G.4

5.

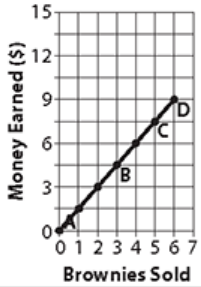
7.NS.3

6.

7.EE.1

7.

7.RP.2



8.

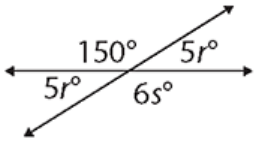
7.RP.3

9.

7.NS.2

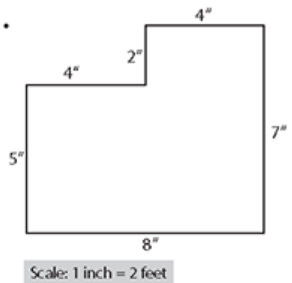
10.

7.G.5



11.

7.G.1



12.

7.SP.2

B Quiz #26

Lessons 101–104

1. Write an expression to represent the sum of two consecutive even numbers. Let x equal the first number.

2. Simplify this complex fraction. $\dfrac{\frac{5}{8}}{2\frac{1}{2}}$

3. Find the values of c and d.

4. The table displays results of a simple random sample taken from a population of 125,000 voters. Find the mean; then, estimate the number of voters who are against the issue.

Sample Group	For	Against	Total
A	41	59	100
B	39	61	100
C	40	60	100

5. Solve. $(5\frac{1}{5} - 3\frac{3}{5}) \times 5 = ?$

6. The Hanson family went out to dinner. The food bill was $48.50, and the family left a 20% tip. How much did the Hansons pay for dinner?

7. Solve for x. $3x + 7 = 16$

8. Austin missed 3 items each on 5 homework assignments. Which equation best shows how many items he missed? What does the product mean?

9. Compare the length of side AB to the length of side EF. Then, write a ratio to represent the scale.

10. Write an expression in simplest form to show the perimeter of the rectangle. Find the perimeter when $x = 3$ ft.

11. Which two expressions have the same value? Give the sum.

12. Find the area of a circle that has a diameter of 46 inches.

1.

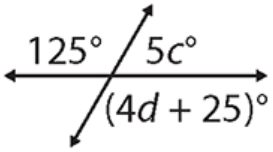
7.EE.2

2.

7.RP.1

3.

7.G.5



4.

7.SP.2

5.

7.NS.3

6.

7.RP.3

7.

7.EE.4

8.

7.NS.2

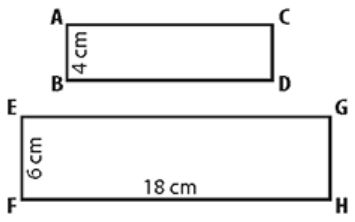
A) $-3 \times -5 = 15$

B) $-3 + -5 = -8$

C) $-3 \times 5 = -15$

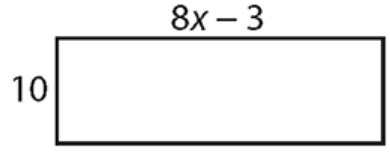
9.

7.G.1



10.

7.EE.1



11.

7.NS.1

A) $-6 + 21$

B) $-21 + 6$

C) $21 + 6$

D) $6 + (-21)$

12.

7.G.4

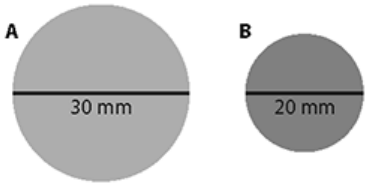
B Quiz #27

Lessons 105–108

1. Tristin wants to build a 3-foot wide sidewalk around a square pool. The measure of one side of the square is s. Write an expression to find the perimeter of the sidewalk.

2. Stroller rental at the zoo costs $14.00 per day, but members get a 6% discount. What price do members pay for stroller rental?

3. Determine the combined area of circle A and circle B.



4. Fred earns a 8.5% commission on his annual sales of $250,000. If he gets his commission in eight equal payments, how much will the check be each time?

5. What is $P(6, 1)$ on two consecutive rolls of a number cube?

6. Use long division to write the fraction $\frac{3}{11}$ as a decimal.

7. The graph represents the cost of gasoline. What is the meaning of point N on the graph? What is the meaning of point L?

8. Angela spent $235 on 5 tickets to a rock concert this summer. Included in that amount was an additional service charge of $25.00. Write and solve an equation to find out how much each ticket cost.

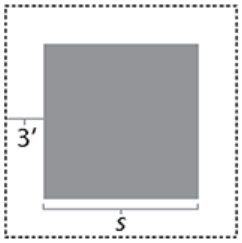
9. Dina mixes $\frac{1}{5}$ cubic yard of organic fertilizer with $\frac{2}{3}$ cubic yard of soil. Give the ratio of soil to fertilizer as a unit rate.

10. Find the values of a, b, and c.

11. Solve. $36 \div 4 + 7 \times 2 - 4 + 3 = ?$

12. An art box has markers of 5 different colors. There are 6 red markers, 1 black marker, 8 blue markers, 2 yellow markers, and 3 green markers. When Petra grabs a marker without looking at the color, what is the probability she will pick blue?

1. 7.EE.2



2. 7.RP.3

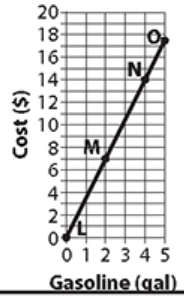
3. 7.G.4

4. 7.EE.3

5. 7.SP.8

6. 7.NS.2

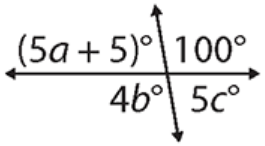
7. 7.RP.2



8. 7.EE.4

9. 7.RP.1

10. 7.G.5



11. 7.NS.3

12. 7.SP.5

B Quiz #28

Lessons 109–112

1. What is $P(\text{TTTHH})$ on five consecutive flips of a coin?

2. Mike's tractor uses $\frac{1}{4}$ gallon of gas for every lawn he mows. He mows 20 lawns per week. Write an equation to show the amount of gas consumed in one week.

3. Which of these could <u>not</u> be the three angle measures of a triangle?

4. Tony has \$30 to ski and buy lunch. If skiing costs \$18, what is the greatest amount he can spend on lunch? Write and solve an inequality to represent this amount.

5. Find the circumference of a circle that has a radius of 24 inches.

6. There are 1,200 trees at Colony Lake Park. If $\frac{1}{20}$ of the trees are evergreens, 25% percent are birch trees, is it reasonable to say that about 850 trees are neither birch, nor evergreen trees? Explain.

7. Simplify this complex fraction. $\dfrac{\frac{1}{6}}{\frac{1}{3}}$

8. Devon is polling voters to find out if they support a candidate for the city council. His poll is taken from a random sampling of people registering to vote at the politically neutral Bureau of Motor Vehicles. He conducts the poll over the course of five days. Is the study likely to yield valid results? Defend your answer.

9. Solve. $8 + 7 - 3 \times 2 + 12 \div (-3) = ?$

10. Find the values of a and b.

11. Write an expression in simplest form to show the perimeter of this equilateral triangle. Find the perimeter if $b = 10$ cm.

12. The data in the table is based on a simple random sample of 40,000 vehicle owners. About how many people in the total population own a truck or SUV?

Sample Group	No Car	Sedan	Van	Truck or SUV	Total
A	82	53	49	16	200

1.

7.SP.8

2.

7.NS.2

3.

7.G.2

A) 90°, 35°, 55°

B) 60°, 55°, 65°

C) 75°, 35°, 70°

D) 50°, 60°, 90°

4.

7.EE.4

5.

7.G.4

6.

7.EE.3

7.

7.RP.1

8.

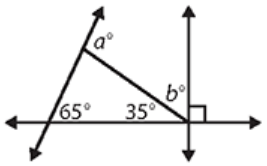
7.SP.1

9.

7.NS.3

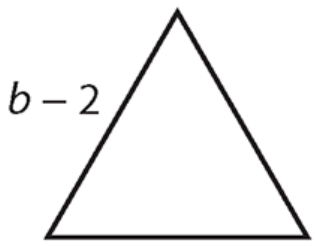
10.

7.G.5



11.

7.EE.1



12.

7.SP.2

B Quiz #29
Lessons 113–116

1. A cooler holds 8 grape and 5 strawberry sodas. What is the probability that Erin will randomly choose a strawberry soda?

2. Study the scale drawing. Determine the actual length of each side. Then give the perimeter and area of the room it represents.

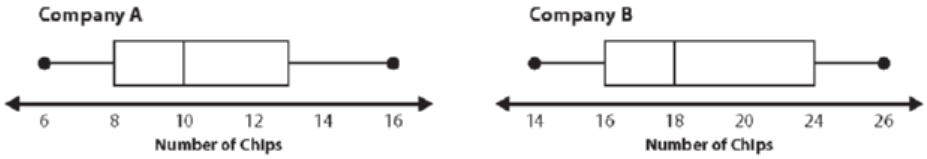
3. Find the values of a and b.

4. Use long division to write the fraction $-\frac{4}{5}$ as a decimal.

5. The cafeteria serves 3 kinds of sandwiches: hot dog, hamburger, and chicken. It also offers 3 sides: chips, salad, and fries. Create an organized list to show the sample space of lunches that include a sandwich and a side.

6. Elsa earns $18.50 an hour now, but she will receive a raise of 12% per hour. If Elsa works 40 hours per week, how much will she earn per week after she gets the raise? Explain or show your work.

Product researchers analyzed two popular brands of chocolate chip cookies to find the number of chocolate chips per cookie. The results are displayed in the box plots. Use the box plots to answer the next two items.



7. Give the median and interquartile range for each data set.

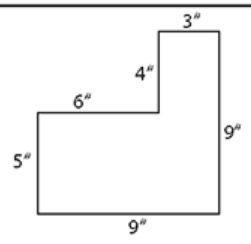
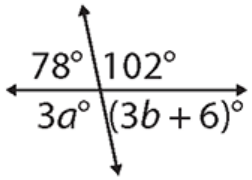
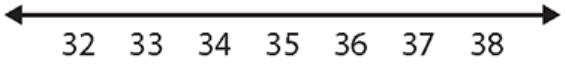
8. Both companies claim that their cookies have the most chocolate chips. Based on data shown here, which company makes the cookies with the most chocolate chips? Explain.

9. Convert this complex fraction to a unit rate. $\dfrac{5\frac{1}{2}}{2\frac{3}{4}}$

10. Solve for y. Graph the solution on a number line. $y + 22 > 56$

11. Ben invested $840 in a local restaurant for 2 years. If the investment earned 15% interest per year, how much money did Ben earn on his investment? Use the formula for simple interest to find your answer.

12. In Jean's class of 30 students, a random drawing is used to select three team leaders. Each student has an equal chance. Determine the probability that Jean will get to be a leader.

1. 7.SP.5	2. 7.G.1  Scale: 1 inch to 3 yd
3. 7.G.5  	4. 7.NS.2
5. 7.SP.8	6. 7.EE.3
7. 7.SP.3	8. 7.SP.3
9. 7.RP.1	10. 7.EE.4 
11. 7.RP.3	12. 7.SP.7

B Quiz #30
Lessons 117–120

1. Find the circumference of a circle that has a radius of 28 inches.

2. The data in the table is based on a systematic random sample in which people were asked whether they plan to attend the county fair. The survey was taken in a county of 60,000 residents. Find the mean, and predict the number who will attend the county fair.

Sample Group	Plan to Attend	Do Not Plan to Attend	Total
A	65	35	100
B	61	39	100

3. Scott receives a 7.5% commission on his annual sales of $425,000. If he gets his commission in twelve monthly payments, what will the amount of each check be?

4. A bag of 12 marbles has 2 blue, 7 green, 1 yellow, and 2 red. If a blue marble is pulled at random and not put back, give the probability that the second marble pulled will be yellow.

5. A can of cola has 180 Calories. Make a table showing the Calorie count of 2, 4, 7, and 9 cans of cola. What is the constant of proportionality? Write an equation for this relationship, if n is number of cans and c is number of Calories.

6. Solve for x. Graph the solution on a number line. $2x + 7 \geq 15$

7. Tina used $\frac{1}{4}$ of a gallon of paint to cover $\frac{1}{10}$ of the fence. How many gallons of paint does she need to paint the entire fence?

8. The spinner shown here lands on the number one 6 out of 36 spins. Calculate the theoretical probability and the relative frequency of this outcome.

9. The boys' basketball team scored 60 points in the first game and 54 in the second game. Give the percent of decrease in points from game one to game two.

10. Find the values of a and b.

11. Find the surface area of the prism.

12. Use long division to write the fraction $-\frac{2}{5}$ as a decimal.

1.

7.G.4

2.

7.SP.2

3.

7.EE.3

4.

7.SP.8

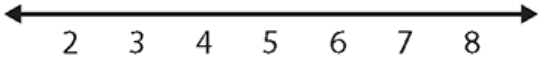
5.

7.RP.2

Number of cans (n)	2	4	7	9
Calories (c)				

6.

7.EE.4

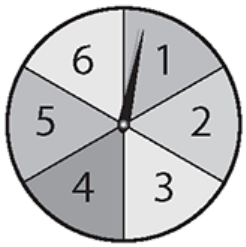


7.

7.RP.1

8.

7.SP.6

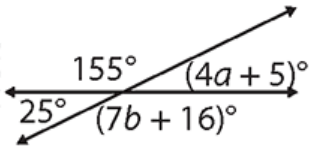


9.

7.RP.3

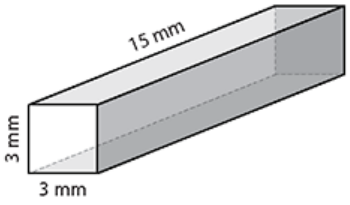
10.

7.G.5



11.

7.G.6



12.

7.NS.2

B Quiz #31
Lessons 121–124

1. Solve. $3 + 4(5) - 10 - 6 + 8 \div 8 = ?$

2. Solve for x. Graph the solution on a number line. $4x - 6 \leq 10$

3. Below are the menu choices for a three-course meal. Create an organized list to show the sample space for a dinner of one appetizer, one entrée, and one dessert.

Appetizer	Entrée	Dessert
Wings (W)	Pork (P)	Torte (T)
Soup (S)	Chicken (C)	Pie (P)

4. Find the values of a and b.

5. Kitty wanted to buy a computer. She found one that cost $440, and she had a coupon for a 12% discount. How much did Kitty pay for the computer?

6. A number wheel is divided into 4 equal sections painted yellow, black, green, and orange. In 200 spins, exactly how times will the wheel land on orange?

7. Any right rectangular pyramid sliced by a plane parallel to its base produces a rectangle that is **similar** to the base. Imagine that you have a hollow pyramid with a square base. You divide the pyramid into several stories. Each story would have a square floor, and the closer you get to the vertex, the smaller the floor would be. Choose the slice that would <u>not</u> result in such a rectangle.

8. Find the product. $-5(-3)(-4)$

9. Simplify the following expression: $8w + 6w - 5$. Evaluate the expression when $w = 5$.

10. The graph represents the cost of potatoes at a farmer's market. Write an equation to represent the relationship between pounds of potatoes (p) and their cost (c).

11. Simplify this complex fraction. $\dfrac{3\frac{1}{5}}{1\frac{1}{2}}$

12. Study the table. Rank the corn stalks from tallest to shortest.

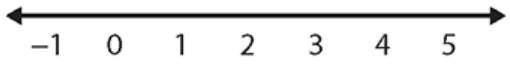
Stalk A	Stalk B	Stalk C	Stalk D
160 in.	120% of Stalk A	¾ of Stalk A	1.22 of Stalk A

1.

7.NS.3

2.

7.EE.4

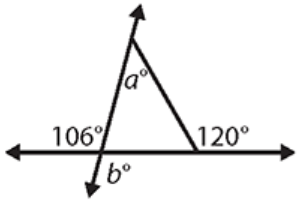


3.

7.SP.8

4.

7.G.5



5.

7.RP.3

6.

7.SP.6

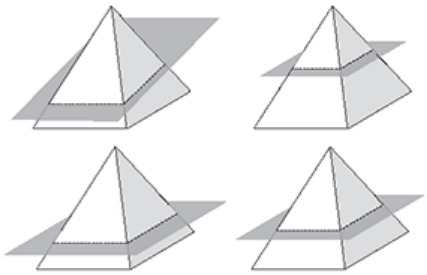
A) unknown

B) 50 times

C) 25% of the spins

7.

7.G.3



8.

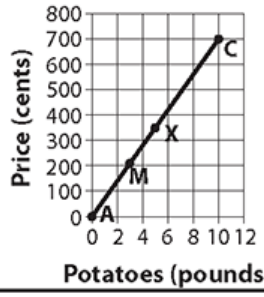
7.NS.2

9.

7.EE.1

10.

7.RP.2



11.

7.RP.1

12.

7.EE.3

B Quiz #32

Lessons 125–128

1. Three coins are white on one side and black on the other. If Floyd tosses them, what is the probability that all will land on white? Create a tree diagram to show the sample space. Find $P(\text{BWB})$.

2. Divide. Write the quotient in simplest form. $-2\frac{1}{3} \div -1\frac{1}{9}$

3. Find the values of a and b.

4. Kenny earns \$22.00 per hour now. He'll get a raise of 9% per hour, and after that, he will work 40 hours per week. Kenny estimates that his weekly earnings will be about \$960. Is this reasonable? Explain.

5. Fernando worked for a travel agency. He earned a 15% commission on every beach vacation he sold. Today, he sold 2 beach vacations at \$3,500 each. How much commission did Fernando earn?

6. Each solid has a rectangular base and is sliced by a plane. Choose the slice that would <u>not</u> form a rectangular cross section.

7. Which of these represents 1 unit away from −12 in the negative direction on a number line?

8. Sarah and Blake each bought a copy of the same book. Blake also bought a \$4 magazine. Write an expression to represent the amount they spent together. Let b equal the price of a book.

9. An equilateral triangle has a perimeter of $6v + 9$. Find the perimeter if $v = 4$ m.

10. In a regular deck, there are 52 cards with 13 cards in each suit (4 suits each of hearts, clubs, diamonds, and spades). What is the probability of randomly choosing a club from a regular deck of cards? What is the probability of choosing a spade? Express each probability as a fraction.

11. Find the volume of the prism.

12. Solve for x. Graph the solution on a number line. $2x - 10 \leq -6$

1.

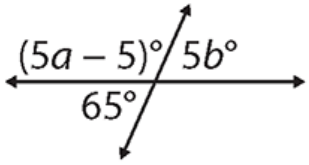
7.SP.8

2.

7.NS.2

3.

7.G.5



4.

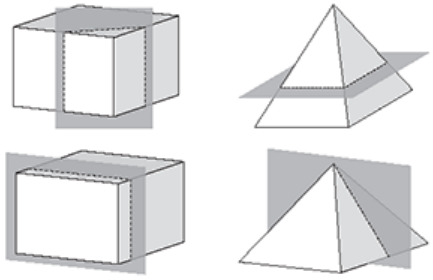
7.EE.3

5.

7.RP.3

6.

7.G.3



7.

7.NS.1

A) $-1 + (-12)$

B) $-12 + 1$

C) $1 + (-12)$

8.

7.EE.2

9.

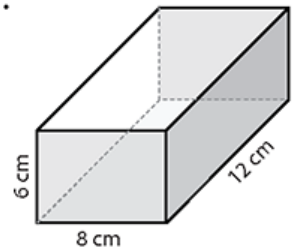
7.EE.1

10.

7.SP.5

11.

7.G.6



12.

7.EE.4