

# Domain 1: Cumulative Assessment for Lessons 1–8

- A computer that originally cost \$899 is on sale for 15% off. What is the sale price of the computer?
  - \$134.85
  - \$764.15
  - \$884.00
  - \$1,033.85
- The temperature on Mars may reach a high of  $70^{\circ}\text{F}$  at the equator in the summer. It may reach a low of  $-225^{\circ}\text{F}$  at the poles. Which expression gives the difference between those temperatures?
  - $225^{\circ}\text{F} - 70^{\circ}\text{F}$
  - $-70^{\circ}\text{F} + 225^{\circ}\text{F}$
  - $70^{\circ}\text{F} - 225^{\circ}\text{F}$
  - $70^{\circ}\text{F} - (-225^{\circ}\text{F})$
- Which fraction can be expressed as a terminating decimal?
  - $\frac{7}{8}$
  - $\frac{1}{3}$
  - $\frac{2}{9}$
  - $\frac{1}{7}$
- Ms. Peters said that  $\frac{5}{8}$  of her dance students prefer ballet. Which percent is equivalent to  $\frac{5}{8}$ ?
  - 58%
  - 62.5%
  - 580%
  - 625%
- What is the sum of  $63 + (-81)$ ?
  - 144
  - 18
  - 18
  - 144
- Val scored 85% on a test with 60 multiple-choice problems. How many problems did Val answer correctly?
  - 51
  - 45
  - 33
  - 25
- Divide.  
 $-960 \div (-8) = \square$ 
  - 968
  - 120
  - 12
  - 120

Domain 1: Cumulative Assessment for Lessons 1–8

8. Subtract.

$$2\frac{4}{5} - 1\frac{1}{2} = \square$$

- A.  $6\frac{1}{3}$
- B.  $2\frac{3}{5}$
- C.  $1\frac{3}{10}$
- D.  $1\frac{1}{5}$

9. In an experiment, the temperature fell  $48^{\circ}\text{F}$  in 8 minutes. If the temperature fell at the same rate every minute, how many degrees did it change each minute?

---

10. Broderick had \$420 in his checking account. He made 6 deposits of \$35.50 each. He needs to write 4 checks for \$310.75 each.

A. Write an integer to represent the total deposits Broderick made and another integer to represent the total amount Broderick needs from his checking account to cover the checks.

Show your work.

---

---

B. How much money does Broderick need to add to his account to cover his checks?

Show your work.

---

---

## Domain 2: Cumulative Assessment for Lessons 9–12

1. A delivery truck traveled 133 miles in 3.5 hours. What was the average speed of the delivery truck in miles per hour?
- A. 33 miles per hour  
B. 35 miles per hour  
C. 38 miles per hour  
D. 43 miles per hour
2. What value of  $x$  makes this proportion true?
- $$\frac{120}{165} = \frac{x}{11}$$
- A. 8  
B. 9  
C. 10  
D. 12
3. A recipe for whole grain rolls calls for  $\frac{3}{4}$  cup rye flour. The recipe makes 6 rolls. How many cups of rye flour are needed to make 32 rolls?
- A.  $3\frac{1}{4}$  cups  
B. 4 cups  
C.  $4\frac{3}{4}$  cups  
D. 8 cups
4. It takes Joaquin  $\frac{1}{5}$  hour to hike  $\frac{1}{4}$  mile. What is Joaquin's unit rate, in miles per hour?
- A.  $\frac{1}{20}$  mile per hour  
B.  $1\frac{1}{4}$  miles per hour  
C. 2 miles per hour  
D. 20 miles per hour
5. What value of  $n$  makes this proportion true?
- $$\frac{4.5}{n} = \frac{27}{37.8}$$
- A.  $n = 3.2$   
B.  $n = 6.3$   
C.  $n = 10.8$   
D.  $n = 22.5$
6. A candle crafter packs 180 candles in 5 boxes. Each box holds the same number of candles. Which equation shows the relationship between the number of boxes,  $b$ , and the number of candles,  $n$ ?
- A.  $n = 5b$   
B.  $n = 24b$   
C.  $n = 36b$   
D.  $n = 900b$

7. The function table shows the relationship between the height and the age in weeks of a plant.

Age, $w$ (in weeks)	Height, $h$ (in inches)
1	3
2	6
3	9
4	12
5	15

Which equation shows the relationship between the height and age of the plant?

- A.  $h = w + 3$       C.  $h = 3w$   
 B.  $h = \frac{1}{3}w$       D.  $h = 5w$

8. Kiran bought 6 yards of ribbon for \$3.90. Which ratio is proportional to 6 yards at \$3.90?

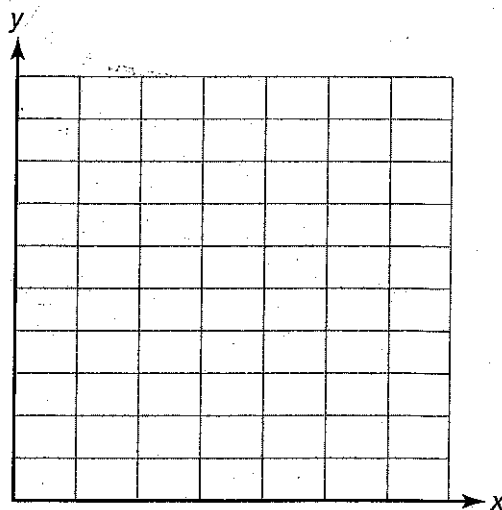
- A.  $\frac{\$1.36}{2 \text{ yards}}$       C.  $\frac{\$2.64}{4 \text{ yards}}$   
 B.  $\frac{\$1.92}{3 \text{ yards}}$       D.  $\frac{\$3.25}{5 \text{ yards}}$

9. A stage designer is making a rectangular drape that is 7 yards in length and 16 yards in width. The fabric for the drape costs \$2.90 per square yard. How much will it cost to make the drape?
- 

10. Friendship bracelets sell for \$7 each. How much will it cost to buy 5 friendship bracelets?

- A. Write and solve an equation to solve the problem.
- 
- 

- B. Make a graph to display the relationship.



## Domain 3: Cumulative Assessment for Lessons 13–18

1. Sarvenanda saved  $\frac{3}{5}$  of the money he earned doing yard work. He saved \$120 in all. Which equation can be used to find how much money,  $m$ , he earned doing yard work?
- A.  $m - \frac{3}{5} = 120$   
B.  $\frac{3}{5} + m = 120$   
C.  $m \div \frac{3}{5} = 120$   
D.  $\frac{3}{5}m = 120$
2. Which is equivalent to the expression below?
- $$4x + 2x - 2y - y$$
- A.  $-6(x + y)$   
B.  $-3(2x + y)$   
C.  $6(x - y)$   
D.  $3(2x - y)$
3. What is the value of the expression below when  $a = 3$  and  $b = 7$ ?
- $$a^2b - 2b$$
- A. 28  
B. 33  
C. 49  
D. 54
4. Dora found 6 less than 3 times the number of shells that Tess found at the beach. Let  $s$  represent the number of shells that Tess found. Which expression represents the number of shells that Dora found?
- A.  $3s - 6$   
B.  $3s + 6$   
C.  $6 - 3s$   
D.  $3 + 6s$
5. Cicely has \$30 to spend on art supplies. She wants to buy as many pastels as possible after buying a sketchbook that costs \$6. The pastels cost at most \$4 each. What is the greatest number of pastels she can buy?
- A. 4  
B. 5  
C. 6  
D. 7
6. Dennis sold his skateboard for 15% more than he paid for it. If Dennis paid  $d$  dollars for the skateboard, which expression represents how much he sold it for?
- A.  $0.15d$   
B.  $1.15d$   
C.  $1.5d$   
D.  $1.55d$
7. The cafeteria has 4 cases of tuna and 9 single cans of tuna. In all, there are 65 cans of tuna. How many cans of tuna are in a case?
- A. 5  
B. 13  
C. 14  
D. 16

8. Which of the following shows how this expression can be simplified?

$$4x - 6 - 6x + 3$$

- A.  $-2x - 9$
- B.  $-2x - 3$
- C.  $10x - 3$
- D.  $10x + 3$

9. Monica earns \$140 per week plus \$15 for every painting she sells at the gallery. She wants to earn at least \$200 this week. How many paintings,  $p$ , does she need to sell to reach her goal? Write and solve an inequality to represent the situation.
- 

10. The cost of renting a private room at a restaurant is \$400. There is also a charge of \$25 for each person who attends. The total cost for Christian's party at the restaurant was \$775.

- A. Write an algebraic equation to represent the situation.

---

---

- B. How many people attended Christian's party? Explain your thinking.

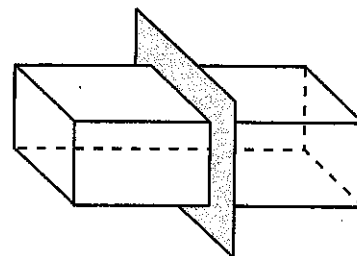
---

---

---

## Domain 4: Cumulative Assessment for Lessons 19–27

- A pole that is 12 feet tall casts a shadow that is 9 feet long. At the same time of day, how long is the shadow cast by a tree that is 45 feet tall?
  - 27 ft
  - 29.25 ft
  - 31.5 ft
  - 33.75 ft
- The scale on a map is 2 inches = 75 miles. If two cities are 575 miles apart, how many inches apart are they on the map?
  - $3\frac{5}{6}$  in.
  - $7\frac{2}{3}$  in.
  - $11\frac{1}{2}$  in.
  - $15\frac{1}{3}$  in.
- Carson wants to construct a triangle with side lengths of 4 inches, 7 inches, and 12 inches. Which best describes a triangle with those side lengths?
  - a unique, right triangle
  - a unique, acute triangle
  - nonexistent
  - ambiguously defined
- A rectangular prism is sliced by a plane that is perpendicular to its base, as shown. What is the shape of the cross section formed?



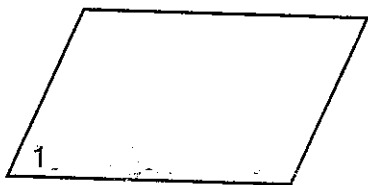
- trapezoid
- square
- rectangle (not a square)
- parallelogram (not a rectangle)

Domain 4: Cumulative Assessment for Lessons 19–27

5. A circular clock has a radius of 8.5 centimeters. Which is closest to the circumference of the clock?

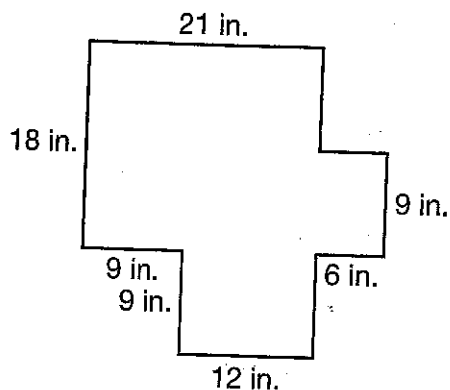
- A. 14.13 cm
- B. 26.69 cm
- C. 53.38 cm
- D. 226.87 cm

6. If  $m\angle 1$  is  $55^\circ$  in the parallelogram below, what is the measure of its supplementary angle?



- A.  $35^\circ$
- B.  $45^\circ$
- C.  $115^\circ$
- D.  $125^\circ$

7. Brook made a base to set under her ferret's cage. The drawing below shows the shape of the base.



What is the area of the base?

- A.  $486 \text{ in.}^2$
  - B.  $540 \text{ in.}^2$
  - C.  $567 \text{ in.}^2$
  - D.  $729 \text{ in.}^2$
8. A rectangular prism has length 9 centimeters, width 6 centimeters, and height 8 centimeters. What is the volume of the rectangular prism?
- A.  $432 \text{ cm}^3$
  - B.  $328 \text{ cm}^3$
  - C.  $216 \text{ cm}^3$
  - D.  $164 \text{ cm}^3$



# Domain 5: Cumulative Assessment for Lessons 28–35

1. Reyes conducted an experiment by tossing two number cubes a total of 72 times. He found the sums and recorded the results in the table.

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

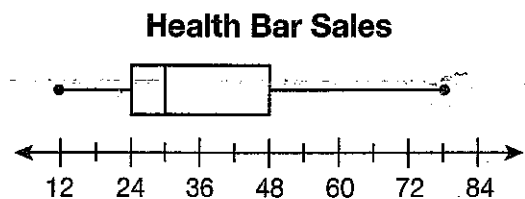
Which sum has a greater experimental probability than theoretical probability?

- A. 3
- B. 5
- C. 6
- D. 12

2. Isabelle is taking a survey to find the most popular music group of students in her community. Which of these is **not** a way for her to get a representative sample of this information?

- A. ask every tenth student she sees at a concert
- B. ask every fifth student entering her school in the morning
- C. ask every third student she encounters at the mall
- D. ask every student at a local movie theater

3. Students on a soccer team sold health bars for a fund-raiser. The box plot shows the number of bars sold by the students on the team.



Which statement is **not** true about the data?

- A. The range of the sales is 72 bars.
- B. The first quartile of the data is 24 bars.
- C. The third quartile of the data is 48 bars.
- D. The interquartile range of the data is 24 bars.

6. Amir rolled two number cubes, labeled 1 to 6, 25 times. His results are shown in the table below.

**Amir's Number Cube Results**

Sum	Number of Tosses
Even	9
Odd	16

Amir repeats the experiment and rolls the two number cubes 125 times. Based on the experimental probability, which of the following is the most reasonable prediction?

- A. The sum of the cubes will be odd 80 times.
  - B. The sum of the cubes will be even 25 times.
  - C. The sum of the cubes will be odd 20 times.
  - D. The sum of the cubes will be even 13 times.
7. The times that Gemma practiced piano last week were 20, 25, 30, 20, and 30 minutes. The times that Arturo practiced piano last week were 50, 15, 30, 35, and 10 minutes. Which of the following statements is true?
- A. The variability in Gemma's mean practice times is about half the variability in Arturo's mean practice times.
  - B. The variability in Gemma's mean practice times is about twice the variability in Arturo's mean practice times.
  - C. The variability in Gemma's mean practice times is about one-third the variability in Arturo's mean practice times.
  - D. The variability in Gemma's mean practice times is about one-fourth the variability in Arturo's mean practice times.
8. The table shows the results of two surveys that Melinda took to find out how many minutes students in the all-city band spend practicing their instruments each day.

Sample	Data
A	20, 35, 45, 45, 60
B	25, 45, 50, 50, 60

Based on the sample data, which of the following is most likely to be closest to the mean number of minutes that students in the all-city band spend practicing each day?

- A. 41
- B. 44
- C. 46
- D. 48

9. The weights, in pounds, of five pumpkins from a pumpkin patch are 17, 18, 17, 15, and 13. What is the mean absolute deviation of the weights?
- 

10. Chris sells homemade soap. The table shows the number of bars of soap Chris sold at the Farmer's Market over a five week period.

**Soap Sales**

Week	Number Sold
1	130
2	180
3	200
4	110
5	140

- A. What is a reasonable prediction of the mean number bars of soap Chris will sell each week at the Farmer's Market? Explain your thinking.

---



---



---



---



---

- B. What is a reasonable prediction of the median number of bars of soap Chris will sell each week if he sells his soap at other craft markets? Explain your thinking.

---



---



---



---



---