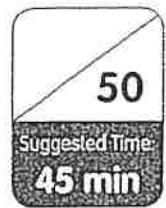


Name: \_\_\_\_\_ Date: \_\_\_\_\_



# Assessment Guide

## Cumulative Review 1



### Section A Multiple-Choice Questions

(10 × 2 = 20 points)

- 1 What is the product of 670 and  $10^2$ ?
  - A 670
  - B 6,700
  - C 67,000
  - D 670,000
  
- 2 What is the value of 420,000 divided by 70 tens?
  - A 600
  - B 4,200
  - C 6,000
  - D 7,000
  
- 3 A printing company uses 307 reams of paper in a month. Each ream has 500 sheets of paper. How many sheets of paper does the printing company use in 10 months?
  - A 3,070
  - B 5,000
  - C 153,500
  - D 1,535,000

4 What is the sum of  $7\frac{3}{8}$  and  $2\frac{5}{6}$ ?

(A)  $9\frac{4}{7}$

(B) 10

(C)  $10\frac{1}{3}$

(D)  $10\frac{5}{24}$

5 A store had 11 kilograms of granola.  $7\frac{6}{11}$  kilograms of granola were sold. How much granola was left in the store?

(A)  $3\frac{4}{11}$  kg

(B)  $3\frac{5}{11}$  kg

(C)  $4\frac{5}{11}$  kg

(D)  $4\frac{6}{11}$  kg

6 Which expression is equal to  $\frac{8}{11}$ ?

(A)  $8 + 11$

(B)  $8 \times 11$

(C)  $\frac{11}{8}$

(D)  $8 \div 11$

7 Which of the following is **not** equal to the product of  $\frac{7}{3}$  and 5?

(A)  $\frac{7}{3} + \frac{7}{3} + \frac{7}{3} + \frac{7}{3} + \frac{7}{3}$

(B)  $\frac{5}{3} \times 7$

(C)  $11\frac{2}{3}$

(D) 35

- 8 What is the missing number?

$$\frac{12}{7} \times \frac{5}{6} = 1\frac{?}{7}$$

- (A) 2
- (B) 3
- (C) 18
- (D) 60

- 9 Which of the following has the same value as  $\frac{1}{5} \div 3$ ?

- (A)  $\frac{1}{5} \times \frac{1}{3}$
- (B)  $5 \div \frac{1}{3}$
- (C)  $3 \div 5$
- (D)  $15 \div 3$

- 10 The width of a piece of cloth is  $3\frac{1}{2}$  meters. Its length is  $1\frac{1}{3}$  times its width. What is the area of the piece of cloth?

- (A)  $4\frac{2}{3} \text{ m}^2$
- (B)  $6\frac{2}{9} \text{ m}^2$
- (C)  $16\frac{1}{3} \text{ m}^2$
- (D)  $21\frac{7}{9} \text{ m}^2$

## Section B Short Answer Questions

(10 × 2 = 20 points)

- 11 Write 5,029,736 in expanded form.

- 12  $7,030 \times 29 =$

Write your answer in the answer grid.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

- 13 Yuna had 115 beads. She packed the beads into bags of 15. She wants to put all of the beads into bags. She said that she would need 8 bags.

Do you agree with Yuna? Explain.

Show your work and write your answer in the space below.

14  $250 - 100 \div 5 =$

Write your answer in the answer grid.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

15  $(42 - 10) \times 3 - (36 + 6) =$

Write your answer in the answer grid.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

16  $\frac{3}{5} \div 2 =$

Show your work and write your answer in the space below.

- 17 Matthew ran  $4\frac{3}{4}$  miles and swam  $1\frac{5}{6}$  miles in a race. What was the total distance of the race?

Show your work and write your answer in the space below.

- 18 Jackson is preparing to host a party and he plans to prepare 40 cups of punch. Each cup can hold  $\frac{1}{5}$  liter of the punch. Jackson mixes  $2\frac{5}{8}$  liters of syrup with  $8\frac{2}{5}$  liters of water.

Does Jackson have enough punch for the party? Explain.

Show your work and write your answer in the space below.

- 19 Diego took  $3\frac{3}{4}$  hours to read a book. Isaiah took  $\frac{1}{3}$  hour less to read his book. How much time did they spend reading in all?

Show your work and write your answer in the space below.



- 20 A rectangular wall measures  $9\frac{1}{3}$  meters by  $2\frac{1}{7}$  meters. What is the area of the wall?

Show your work and write your answer in the space below.

## Section C Constructed Response

(21): 3 points; (22): 3 points;

(23): 4 points)

- 21 Zoe wanted to make 8 bracelets but was short of 115 beads. She made 3 bracelets and found that she had 240 beads left. How many beads did Zoe have?

Write your answer and your work or explanation in the space below.

- 22 Liam baked some cookies.  $\frac{7}{8}$  of them were almond cookies and the rest of them were chocolate cookies. He gave away  $\frac{1}{2}$  of the almond cookies and  $\frac{5}{8}$  of the chocolate cookies. He gave away 132 cookies in all. How many cookies did Liam bake at first?

Write your answer and your work or explanation in the space below.

23 Jack had some marbles. He gave  $\frac{2}{9}$  of them to John and  $\frac{3}{7}$  of the remainder to Landon. Then, Jack bought 45 new marbles and had 15 more marbles than what he had at first. Zane said that Jack had 30 marbles at first because  $45 - 15 = 30$ .

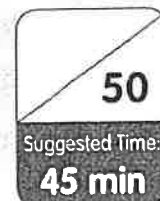
- Explain Zane's mistake.
- How many marbles did Jack have at first?
- Explain how you arrived at your answer.

Write your answer and your work or explanation in the space below.



# Assessment Guide

## Cumulative Review 2



### Section A Multiple-Choice Questions

(10 × 2 = 20 points)

- 1 What is 7.108 as a mixed number in simplest form?
  - (A)  $7\frac{1}{5}$
  - (B)  $7\frac{18}{25}$
  - (C)  $7\frac{11}{125}$
  - (D)  $7\frac{27}{250}$
  
- 2 What is 1.025 as a fraction in simplest form?
  - (A)  $1\frac{1}{4}$
  - (B)  $1\frac{1}{8}$
  - (C)  $1\frac{1}{40}$
  - (D)  $1\frac{1}{125}$
  
- 3 What is the sum of the value of digit 3 in 1.293 and the value of digit 5 in 2.59?
  - (A) 0.35
  - (B) 0.305
  - (C) 0.503
  - (D) 0.8

4 What is 6.389 when rounded to the nearest hundredth?

(A) 6.37

(B) 6.38

(C) 6.39

(D) 6.40

5 What is  $8\frac{8}{1,000}$  as a decimal?

(A) 8.008

(B) 8.08

(C) 8.8

(D) 8.88

6 What is the sum of 7.08 and 2.5?

(A) 9.13

(B) 9.508

(C) 9.58

(D) 10.3

- 7 What are the missing digits?

$$\begin{array}{r} \square.\square 2 \\ + 3.2 \\ \hline 7.1 2 \end{array}$$

- (A) 2; 9  
(B) 3; 9  
(C) 4; 9  
(D) 9; 2
- 8 Which of the following has a value of 10.5?  
Choose the **two** correct answers.
- (A)  $0.021 \times 50$   
(B)  $0.021 \times 500$   
(C)  $0.21 \times 50$   
(D)  $0.21 \times 500$   
(E)  $2.1 \times 500$
- 9 A tank contained 7.02 liters of water. 550 milliliters of water were poured out. How many milliliters of water were left in the tank?
- (A) 64,700 milliliters  
(B) 6,470 milliliters  
(C) 647 milliliters  
(D) 6.47 milliliters

- 10 Amanda ran a number of laps around a track. Each lap was 0.4 kilometer long. She ran a total distance of 1.2 kilometers. Dan ran 2 more laps than Amanda around the same track. How many kilometers did Dan run?
- A 0.2 km
  - B 0.8 km
  - C 2 km
  - D 2.4 km

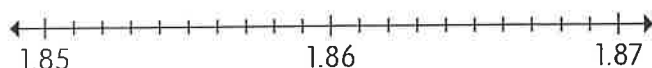


## Section B Short Answer Questions

(10 × 2 = 20 points)

- 11 The distance between the library and Wyatt's house is 1.86 kilometers, rounded to the nearest 2 decimal places. Find the greatest and least possible distance in 3 decimal places before it was rounded to the nearest hundredth. Explain how you arrived at your answer. Use the number line to help you.

Show your work and write your answer in the space below.



- 12 What is  $8\frac{3}{8}$  as a decimal?

Write your answer in the answer grid.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

13  $3.5 + 1.2 =$

Write your answer in the answer grid.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

14 What is 5.36 less than 29.78?

Write your answer in the answer grid.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

- 15 Express 9.875 as a mixed number in simplest form.

Show your work and write your answer in the space below.

- 16  $2.8 \div 40 =$

Write your answer in the answer grid.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

- 17 Estimate the value of  $27.18 \times 2$  by rounding to the nearest whole number.

Show your work and write your answer in the space below.

- 18 Kevin bought 7 melons that cost \$2.75 each. He gave the cashier \$20. He said that he received \$0.75 change.

Was Kevin correct? Explain.

Show your work and write your answer in the space below.

- 19 There are two pieces of ribbon. One piece is 6.42 feet long. The other piece is 1.56 feet shorter. Sanjay needs 12 feet of ribbon for a party.

Does Sanjay have enough ribbon? Explain.

Show your work and write your answer in the space below.

- 20 Ivan saved \$7.50. Kylie saved twice as much as Ivan. Pedro saved \$3.80 more than Kylie. How much did Pedro save?

Show your work and write your answer in the space below.

## Section C Constructed Response

(21): 3 points; (22): 3 points;

(23): 4 points)

- (21) The result of a 100-meter race is as shown.

Athlete	Time (seconds)
Andrea	15.325
Brianna	14.501
Carla	15.243
Daniella	14.498
Emilia	15.401
Fátima	14.975

Fátima said that she came in last.

- Explain Fátima's mistake.
- Which position was Fátima in?
- Explain how you arrived at your answer.

Write your answer and your work or explanation in the space below.



Three boys recorded their long jump distances. Eric jumped 6 centimeters further than Daniel. Eddie jumped 0.12 meter further than Eric. The three boys jumped a total of 5.19 meters. How far did Eddie jump?

Write your answer and your work or explanation in the space below.

23

4 pears and 6 apples cost \$6.90. 6 pears and 4 apples cost \$7.60.  
What is the cost of 1 pear? What is the cost of 1 apple?

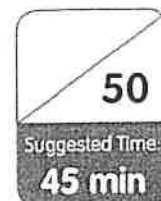
Write your answer and your work or explanation in the space below.





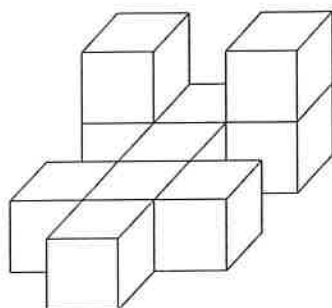
# Assessment Guide

## Cumulative Review 3



### Section A Multiple-Choice Questions

- 1 This solid is made up of 1-inch cubes.  
What is the volume of the solid?

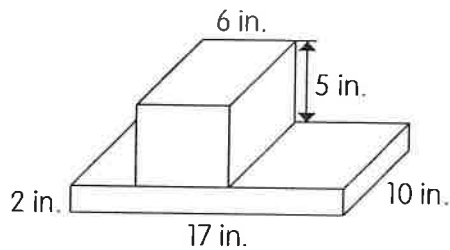


- (1 to 5 Part A,  
5 Part B, 6 Part A,  
6 Part B, 7,  
8: 2 points each)
- (A) 1 cubic inches  
(B) 3 cubic inches  
(C) 10 cubic inches  
(D) 30 cubic inches
- 2 A rectangular prism has a square base of side 3 meters long and a height of 4 meters. What is its volume?
- (A) 9 cubic meters  
(B) 12 cubic meters  
(C) 36 cubic meters  
(D) 64 cubic meters

- 3 A farmer has a barrel with 3 liters and 30 milliliters of water. She adds half a liter of water to the barrel. What is the new volume of water in the barrel, in cubic centimeters?

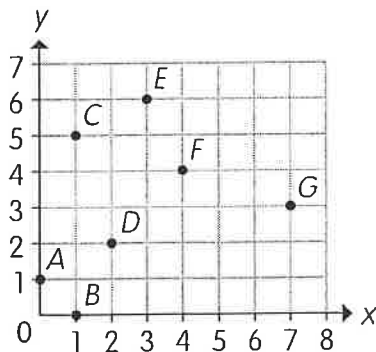
(A) 2,530 cubic centimeters  
(B) 2,800 cubic centimeters  
(C) 3,530 cubic centimeters  
(D) 3,800 cubic centimeters

- 4 What is the volume of the solid?



(A) 300 cubic inches  
(B) 340 cubic inches  
(C) 600 cubic inches  
(D) 640 cubic inches

- 5 This question has two parts.



### Part A

What are the coordinates of point  $E$ ?

- (A) (3, 6)
- (B) (3, 7)
- (C) (4, 4)
- (D) (7, 3)

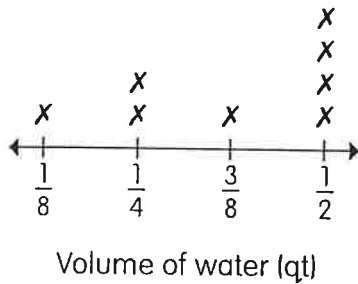
### Part B

Which of the following statements is **not** true?

- (A) The coordinates of point  $F$  are (4, 4).
- (B) Point  $G$  is 6 units to the right and 2 units below point  $C$ .
- (C) Point  $D$  is 2 units to the left and 2 units below point  $F$ .
- (D) Points  $B$ ,  $C$ , and  $G$  form an obtuse triangle.

- 6 This question has two parts.  
The line plot shows the volumes of water in 8 bottles.

Each  $\times$  represents 1 bottle.



### Part A

What is the total volume of water in the 8 bottles?

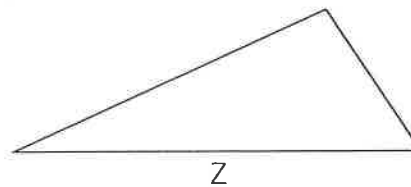
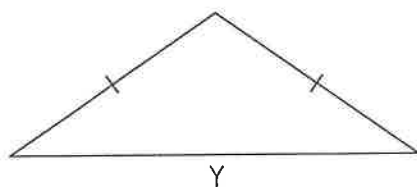
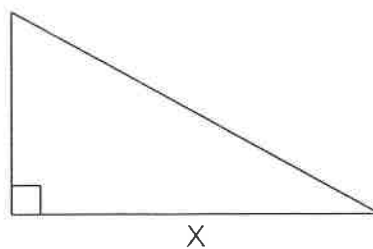
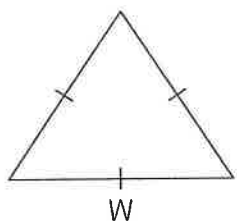
- (A) 1 quart
- (B) 2 quarts
- (C) 3 quarts
- (D) 4 quarts

### Part B

The total volume of water in the 8 bottles is redistributed equally into each bottle. What is the volume of water in each bottle now?

- (A)  $\frac{1}{2}$  quart
- (B)  $\frac{3}{8}$  quart
- (C)  $\frac{1}{4}$  quart
- (D)  $\frac{1}{8}$  quart

- 7 Which of the following is an equilateral triangle?



- (A) W
  - (B) X
  - (C) Y
  - (D) Z
- 8 Which figure is always a rectangle?
- (A) Parallelogram
  - (B) Quadrilateral
  - (C) Rhombus
  - (D) Square

## Section B Short Answer Questions

( 9 to 13 Part A, 13 Part B,  
14 Part A, 14 Part B;  
15 to 16 : 2 points each)

- 9 What is the volume of a rectangular prism measuring 12 inches by 6 inches by 3 inches?

Show your work and write your answer in the space below.

- 10 What is the volume of a cube with an edge length of 20 feet?

Show your work and write your answer in the space below.

- 11 The base area of a rectangular container is 24 square feet. The height of the container is 3 feet. What is the capacity of the container?

Show your work and write your answer in the space below.

- 12 A rectangular fish tank, 30 centimeters by 10 centimeters by 25 centimeters, is  $\frac{1}{3}$  filled with water. Ashley says that she needs 5 more liters of water to fill the fish tank completely.

Do you agree with Ashley? Explain.

Write your answer and your work or explanation in the space below.

- 13 This question has two parts.

The table shows the amount of juice in 10 cartons.

Amount of juice (pt)	$\frac{1}{9}$	$\frac{2}{9}$	$\frac{1}{3}$	$\frac{4}{9}$	$\frac{5}{9}$
Number of cartons	2	1	4	0	3

### Part A

Use the data to make a line plot.

Show your work and write your answer in the space below.

### Part B

Melanie says that there are  $1\frac{2}{3}$  pints of juice in all the cartons because  $\frac{1}{9} + \frac{2}{9} + \frac{1}{3} + \frac{4}{9} + \frac{5}{9} = 1\frac{2}{3}$ .

Explain Melanie's mistake. What should the correct answer be?



- 14 This question has two parts. Factory A produces 150 pairs of jeans in 1 day. Factory B produces 100 pairs of jeans in 1 day.

### Part A

Complete the number pattern.

Write your answer in the tables below. Explain how you arrived at your answer.

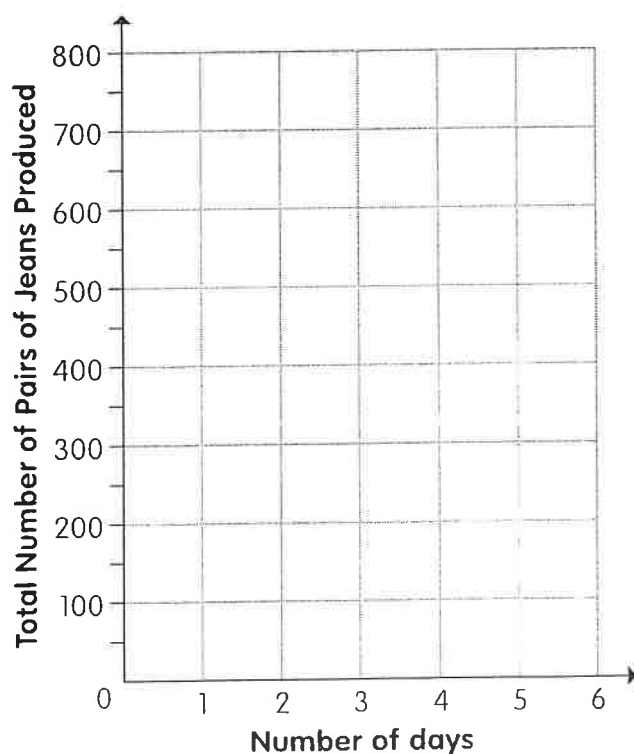
Factory A						
Number of Days	0	1	2	3	4	5
Total Number of Pairs of Jeans Produced	0	150	300	450		

Factory B						
Number of Days	0	1	2	3	4	5
Total Number of Pairs of Jeans Produced	0	100	200	300		

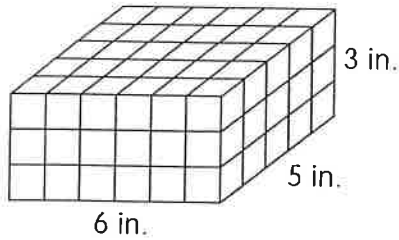
### Part B

Plot each point on a coordinate plane and make line graphs below.

Jeans Production in Factories A and B



- 15 The rectangular prism is made of 1-inch cubes.

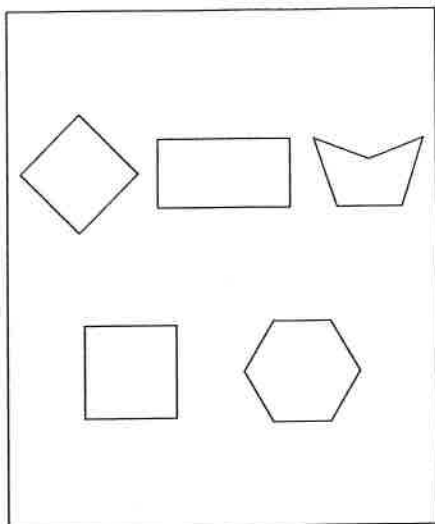


1 layer of cubes is to be removed from the rectangular prism. Aiden says that 30 cubes will be removed in all. Juliet says that 15 cubes will be removed in all.

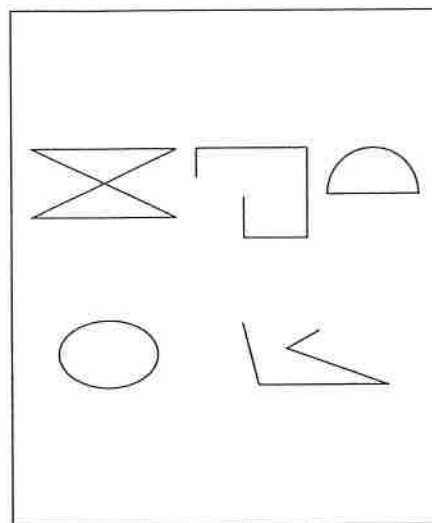
Who is correct, Aiden or Juliet? Explain.

Show your work and write your answer in the space below

16 Look at Set A and Set B.



Set A



Set B

Write the answer in the blank.

Set \_\_\_\_\_ consists of polygons.

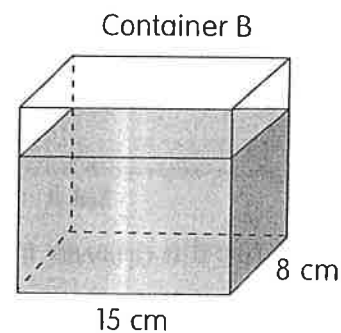
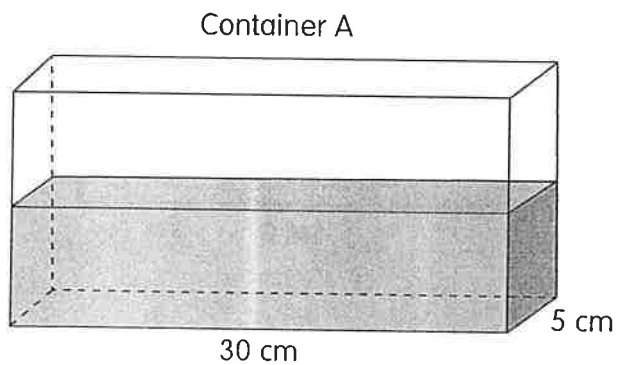
## Section C Constructed Response

(17 : 3 points; 18 : 3 points;

19 : 4 points)

- 17 Two rectangular containers, A and B, contain some water. The water level in both containers is the same. The difference in the volume of water in the two containers is 120 cubic centimeters. What is the total volume of water in containers A and B? Give your answer in liters.

Write your answer and your work or explanation in the space below.

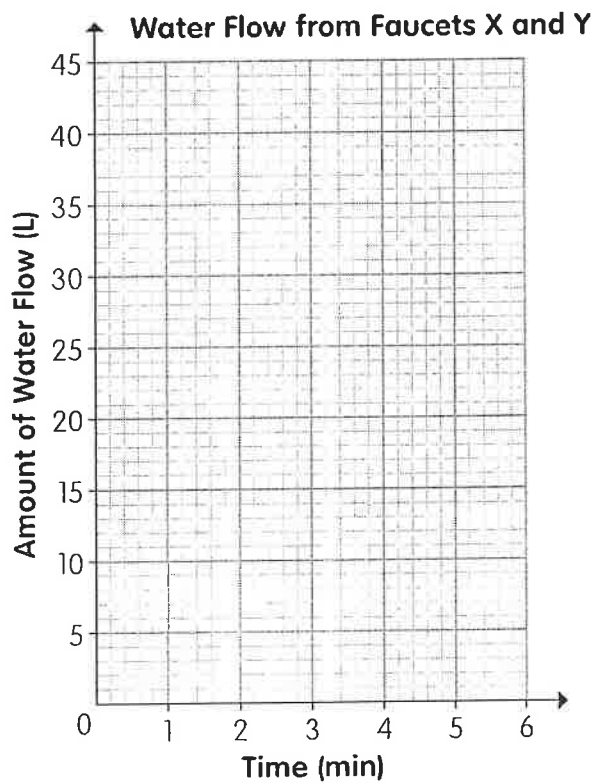




Water flows out of Faucet X at 4 liters per minute while water flows out of Faucet Y at 3 liters per minute. Tyler presents the data in the table below.

Time (min)	1	2	3	4	5	6
Amount of water from Faucet X (L)	4	8	12	16	20	24
Amount of water from Faucet Y (L)	3	6	9	12	15	18

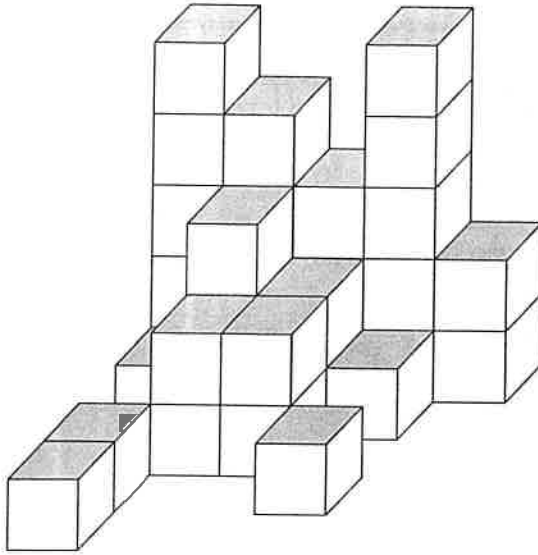
Plot each point on the coordinate plane and make line graphs below.



Tyler places a tank below each faucet to collect the water that flows out. He says that the water collected from Faucet X is always 1 liter more than that from Faucet Y at each point in time. Explain his mistake.

Write your answer and your work or explanation in the space below.

- 19 Daniel fixed a wooden structure as shown below. The structure is made up of 1-centimeter cubes.



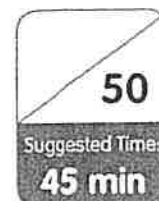
- What is the volume of the wooden structure?
- What is the least number of unit cubes needed to form a cube?  
Explain how you arrived at your answer.

Write your answers and your work or explanation in the space below.



# Assessment Guide

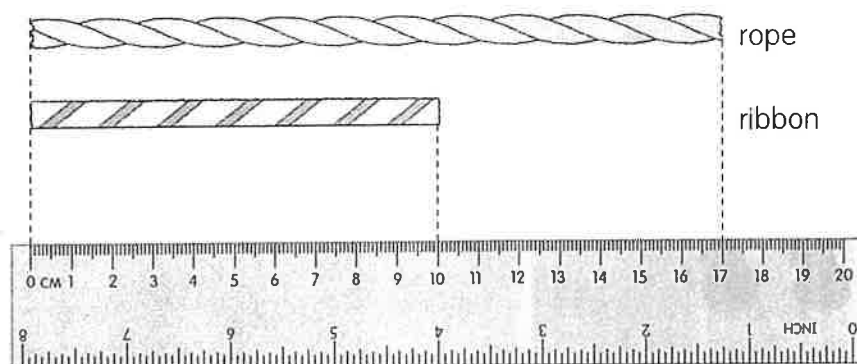
## Cumulative Review 4



### Section A Multiple-Choice Questions

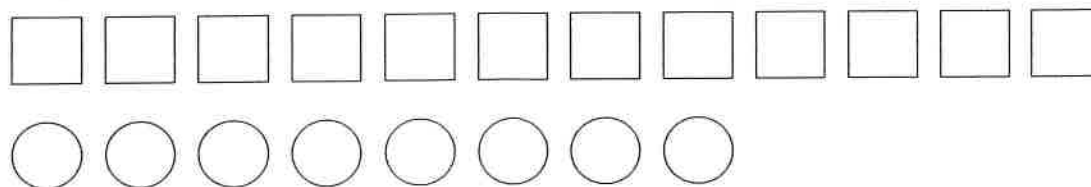
(10 × 2 = 20 points)

- 1 What is the ratio of the length of the ribbon to the total length of the ribbon and the rope?



- A 10 : 17  
B 10 : 27  
C 17 : 10  
D 17 : 27

- 2 What is the ratio of the number of squares to the number of circles in the simplest form?



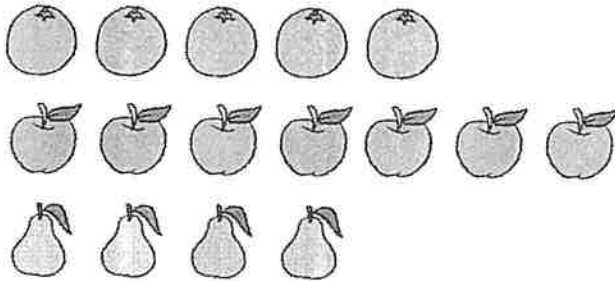
- A 12 : 8  
B 8 : 12  
C 3 : 2  
D 2 : 3

- 3 What is the missing number?

$$13 : 5 = \underline{\hspace{2cm}} : 25$$

- (A) 65
- (B) 33
- (C) 26
- (D) 18

- 4 What is the ratio of the number of pears to the number of oranges to the number of apples?



- (A) 7 : 4 : 5
- (B) 4 : 5 : 7
- (C) 5 : 7 : 4
- (D) 5 : 7 : 11

- 5 What are the missing numbers?

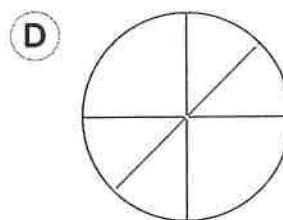
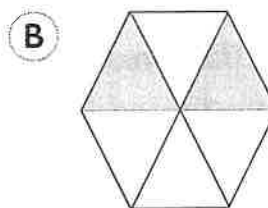
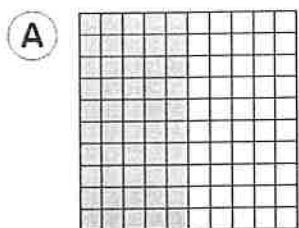
$$3 : 8 : 6 = \underline{\hspace{2cm}} : \underline{\hspace{2cm}} : \underline{\hspace{2cm}}$$

Choose the **two** correct answers.

- (A) 21; 26; 24
- (B) 12; 32; 30
- (C) 9; 24; 18
- (D) 5; 12; 10
- (E) 6; 16; 12



- 6 Noah drew a figure and shaded 60% of it. Which of the following figures could be the one Noah drew?



- 7 Which of the following statements is true?

- A  $\frac{4}{5}$  is the same as 40%.  
 B  $32\% > \frac{16}{50}$  as a percent.  
 C  $\frac{75}{150}$  as a percent is 55%.  
 D 0.13 expressed as a percent is 13%.

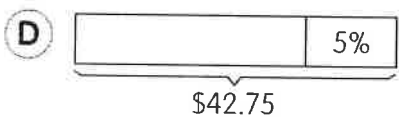
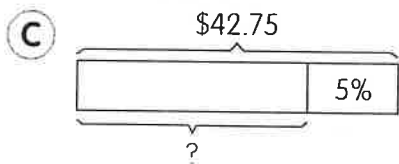
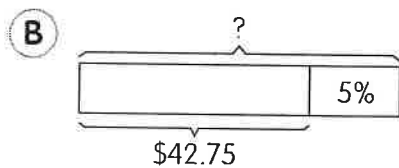
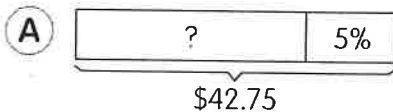
- 8 There are 800 people at a carnival. 64% of them are adults. How many people are adults?

- A 512  
 B 486  
 C 482  
 D 480

- 9 There are 150 fish in a pond. 61 of them are guppies. 30% of them are mollies. The rest are catfish. Which of the following statements are true? Choose the **three** correct answers.

- (A) 40% of the fish are catfish.
- (B) 0.61% of the fish are guppies.
- (C) There are 44 catfish in the pond.
- (D) There are more mollies than catfish.
- (E) There are 16 more guppies than mollies.

- 10 A bag costs \$42.75 after a discount of 5%. Daniel wants to find the price of the bag before discount. Which of the following models can he use?



## Section B Short Answer Questions

(10 × 2 = 20 points)

- 11 A log is cut into two pieces in the ratio 5 : 3. The length of the longer piece is 15 feet long. What is the length of the shorter piece?

Show your work and write your answer in the space below.

- 12 The ratio of the number of adults to number of children in a hall is 6 : 4. There are 96 adults and 40 girls. How many boys are in the hall?

Show your work and write your answer in the space below.

- 13 Brady, Molly, and Faith save \$96 in all. Brady saves \$36 and Molly saves \$24. Express the amount of Brady's savings to the amount of Molly's savings to the amount of Faith's savings as a ratio in simplest form.

Show your work and write your answer in the space below.

- 14 The ratio of the number of toy cars Andre, Rachel, and Haley had was  $3 : 7 : 4$ . Haley had 24 toy cars. How many toy cars did Rachel have?

Show your work and write your answer in the space below.

- 15 There are 50 apples in a box. 40% of the apples are green and the rest are red. How many apples are red?

Show your work and write your answer in the space below.

- 16 The usual price of a refrigerator was \$650. Store A sold the refrigerator at a 30% discount. Store B sold the same refrigerator at \$150 less than the usual price.  
Which store had a better deal? Explain.

Show your work and write your answer in the space below.

- 17 A book costs \$15 before sales tax. There is a 5% sales tax on the book. What is the total cost of the book including the sales tax?

Show your work and write your answer in the space below.

- 18 There are 80 animals in a farm. 40% of the animals are sheep and the rest are cows. How many cows are there?

Show your work and write your answer in the space below.

- 19 Ms. Torres had \$60. She spent 40% of the money on food, 30% of the money on shopping and she saved the rest. She told a friend that she saved more money than the amount spent on food. Is her claim true? Explain.

Show your work and write your answer in the space below.

- 20 There are 600 books at a library. 30% of the books are fiction books and the rest are non-fiction books. The librarian says that there are 240 more non-fiction books than fiction books. Is he correct? Explain.

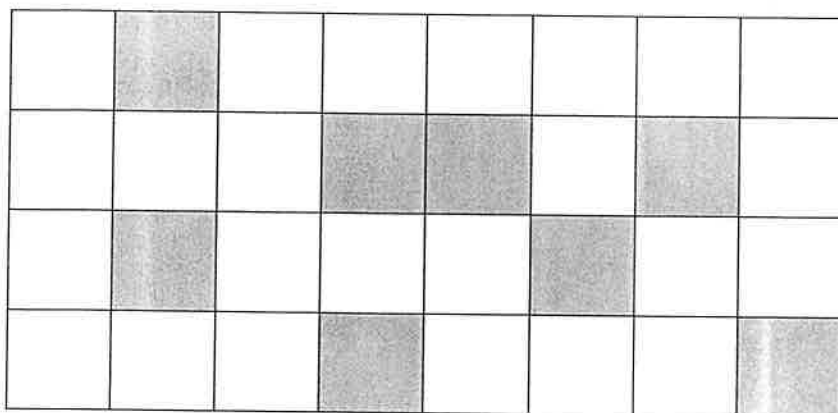
Show your work and write your answer in the space below.

## Section C Constructed Response

(21 : 3 points; 22 : 3 points;

23 : 4 points)

- 21 The figure below is made up of identical squares. How many more squares should be shaded so that the ratio of the number of shaded squares to the number of unshaded squares is 3 : 5?



Write your answer and your work or explanation in the space below.



22

The ratio of the number of shirts sold on Monday to the number of shirts sold on Tuesday to the number of shirts sold on Wednesday was  $3 : 5 : 1$ . The total number of shirts sold during the three days was 450.

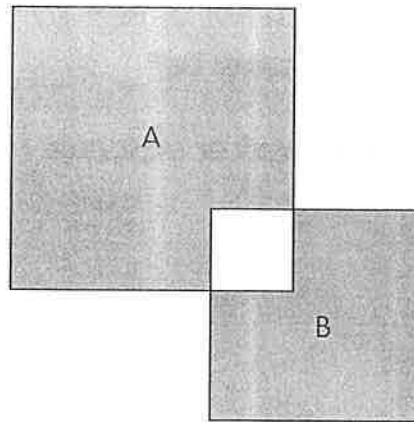
Olivia says that 50 shirts were sold on Monday.

- Explain Olivia's mistake.
- What should the correct answer be?

Write your answer and your work or explanation in the space below.

23

Ms. Perez has two square carpets in her living room, A and B. The carpets overlap each other as shown. The length of Carpet B was 6 meters. The difference between the shaded area of Carpet A and the shaded area of Carpet B was 13 square meters. Find the ratio of the length of Carpet A to the length of Carpet B.



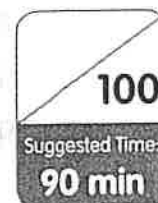
Write your answer and your work or explanation in the space below.

Name: \_\_\_\_\_ Date: \_\_\_\_\_



# Assessment Guide

## Mid-Year Benchmark Assessment



### Section A Multiple-Choice Questions

(20 × 2 = 40 points)

- 1 What is the value of  $503 \times 10^2$ ?
  - A 5,030
  - B 50,300
  - C 503,000
  - D 530,000
  
- 2 What is the missing number?  
 $63,000 \div 900 = \underline{\hspace{2cm}}$ 
  - A 7
  - B 70
  - C 700
  - D 7,000
  
- 3 What is the product of 8,007 and 100?
  - A 80,007
  - B 800,007
  - C 800,070
  - D 800,700

4 What is the value of  $240 \div (2 \times 5)$ ?

- (A) 10
- (B) 24
- (C) 96
- (D) 600

5 What is the sum of  $4\frac{3}{4}$  and  $3\frac{5}{6}$ ?

- (A)  $7\frac{4}{6}$
- (B)  $7\frac{4}{5}$
- (C)  $8\frac{7}{12}$
- (D)  $8\frac{15}{24}$

6 Which expression is equal to  $1\frac{2}{5}$ ?

- (A)  $2 \div 5$
- (B)  $5 \div 2$
- (C)  $5 \div 7$
- (D)  $7 \div 5$

- 7 What is the missing number?

$$6\frac{2}{5}, 5\frac{1}{15}, 3\frac{11}{15}, \text{—————}, 1\frac{1}{15}$$

- (A) 2
- (B)  $2\frac{1}{15}$
- (C)  $2\frac{1}{3}$
- (D)  $2\frac{2}{5}$

- 8 What is the value of  $\frac{15}{7} \times \frac{5}{6}$ ?

- (A)  $2\frac{4}{7}$
- (B)  $1\frac{11}{14}$
- (C)  $\frac{10}{21}$
- (D)  $\frac{8}{9}$

- 9 Which number or fraction can you multiply by  $3\frac{1}{4}$  to get a product greater than  $3\frac{1}{4}$ ?

Choose the **two** possible answers.

- (A) 1
- (B) 2
- (C)  $\frac{1}{2}$
- (D)  $\frac{1}{4}$
- (E)  $1\frac{1}{4}$

- 10 What is the value of  $2\frac{1}{2} \times 4$ ?

Draw models to help you.

(A)  $6\frac{1}{2}$

(B) 8

(C)  $8\frac{1}{2}$

(D) 10

- 11 What is 5.344 as a mixed number in simplest form?

(A)  $5\frac{2}{5}$

(B)  $5\frac{17}{25}$

(C)  $5\frac{34}{125}$

(D)  $5\frac{43}{125}$

- 12 Which expression is equal to 2.108?

(A)  $2 + \frac{7}{125}$

(B)  $2 + \frac{20}{250} + \frac{7}{125}$

(C)  $2 + \frac{10}{100} + \frac{7}{125}$

(D)  $2 + \frac{20}{200} + \frac{1}{125}$

13 What is the value of digit 5 in 3.005?

- A 0.005
- B 0.05
- C 0.5
- D 5

14 A number has 3 decimal places. When rounded to the nearest hundredth, the number is 7.6. Which number is the greatest possible number?

- A 7.551
- B 7.599
- C 7.649
- D 7.659

15 Which numbers or expressions are the same as  $5\frac{1}{1,000}$ ?  
Choose the **two** correct answers.

- A 5.001
- B 5.01
- C 5.1
- D  $\frac{51}{1,000} + \frac{1}{1,000}$
- E  $\frac{500}{100} + \frac{1}{1,000}$

- 16 A stack of books is 8.56 inches high. A stack of papers is 4.4 inches high. How much taller is the stack of books than the stack of papers?

(A) 4.16 inches  
(B) 4.52 inches  
(C) 4.56 inches  
(D) 12.96 inches

- 17 What is the value of  $0.003 \times 400$ ?

(A) 0.012  
(B) 0.12  
(C) 1.2  
(D) 12

- 18 Which of the following has the same value as  $2.4 \div 800$ ?  
Choose the **two** correct answers.

(A)  $3 \div 1000$   
(B)  $30 \div 1000$   
(C)  $0.3 \div 100$   
(D)  $0.03 \times 10$   
(E)  $0.03 \times 100$



- 19 Mr. Smith buys 4 books at a cost of \$13.90 per book. He only has \$20 bills in his wallet. What is the least number of \$20 bills he needs to buy the books?
- (A) 1
  - (B) 2
  - (C) 3
  - (D) 4
- 20 Ms. Lee had 0.75 kilograms of flour. She bought another 2.5 kilograms of flour. How many grams of flour does she have in all?
- (A) 3.25 grams
  - (B) 325 grams
  - (C) 3,250 grams
  - (D) 32,500 grams

## Section B Short Answer Questions

(20 × 2 = 40 points)

21  $607 \times 43 =$

Write your answer in the answer grid.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

22 Divide 7,001 by 57.

Show your work and write your answer in the space below.

- 23 Estimate the sum of  $\frac{8}{9}$ ,  $\frac{5}{6}$  and  $\frac{1}{3}$ .

Write your answer and explanation in the space below.

- 24 Evan traveled  $12\frac{7}{8}$  miles to the bank. From the bank, he traveled  $13\frac{5}{6}$  miles to the supermarket. How far did he travel to get to the supermarket?

Show your work and write your answer in the space below.

- 25 Sarah and Avery were tasked to paint a room each. The rooms were identical. Sarah completed her task in  $4\frac{1}{3}$  hours. Avery finished  $\frac{3}{4}$  hours after Sarah. How long did Avery take to paint the room?

Show your work and write your answer in the space below.

- 26 Ms. Rivera bought two melons. One melon weighed  $5\frac{3}{8}$  pounds and the other melon weighed  $7\frac{6}{7}$  pounds. What was the difference in weight between the two melons?

Show your work and write your answer in the space below.

- 27 What is the value of  $0.678 \times 10^3$ ?

Write your answer in the answer grid.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

- 28 What is 70 centimeters in meters?

Show your work and write your answer in the space below.

- 29 What is  $3\frac{16}{125}$  as a decimal?

Write your answer in the answer grid.

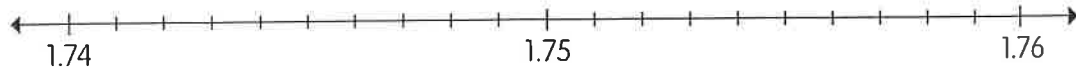
•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

- 30 Express 6.256 as a mixed number in simplest form.

Show your work and write your answer in the space below.

- 31 The volume of water in a bottle rounded to the nearest 2 decimal places is 1.75 liters. Find the greatest and least possible volume of water in the bottle in 3 decimal places before it is rounded to the nearest hundredth. Explain how you arrived at your answer. Use the number line to help you.

Show your work and write your answer in the space below.



- 32 There were 30.56 liters of water in a tank. After three days, there were only 12.68 liters of water left. How much water was used over the three days?

Show your work and write your answer in the space below.

- 33 A plant was 12.78 centimeters tall on Monday. When the height of the plant was measured on Friday, the plant was 1.03 centimeters taller. What was the height of the plant on Friday?

Show your work and write your answer in the space below.

- 34 A tailor had a roll of ribbon 12 yards long. He needed to cut the ribbon into lengths of  $\frac{3}{4}$  yard. How many pieces of ribbon of length  $\frac{3}{4}$  yard would he have?

Show your work and write your answer in the space below.



- 35 A baker had  $24\frac{1}{8}$  kilograms of flour at the start of the day. He used 20 kilograms of flour. At the end of the day, he claimed that he had less than  $\frac{1}{3}$  of the flour left.

Is the baker's claim true? Explain.

Show your work and write your answer in the space below.

- 36 Owen bought a bag of flour. He used  $\frac{2}{5}$  of it to bake a cake and had 450 grams of flour left. Owen said that he bought 750 grams of flour. Was Owen correct? Explain.

Show your work and write your answer in the space below.

- 37 Premium pineapples cost twice as much as regular pineapples. Katelyn bought 6 premium pineapples that cost \$3.78 each and 4 regular pineapples. Katelyn handed the cashier \$40 and expected \$2.20 change.

Is Katelyn correct? Explain how she arrived at her answer.

Show your work and write your answer in the space below.

- 38 Find the value of  $1\frac{3}{4} \times 3\frac{1}{2}$ .

Draw an area model to help you.

- 39 There were red, blue and green balls in a store.  $\frac{3}{8}$  of the balls were blue. There were twice as many red balls as green balls. There were 68 more blue balls than green balls in the store. How many balls were there in all?

- 40 Sebastian needs to paint 350 tiles. Each tile requires  $\frac{1}{12}$  liter of paint. Sebastian has  $23\frac{8}{15}$  liters of paint. He buys another  $6\frac{13}{20}$  liters of paint. Is there enough paint for all the tiles? Explain.

Show your work and write your answer in the space below.

## Section C Constructed Response

(41 to 45: 4 points each)

- 41 A pen and a notebook cost \$2.10. Angel paid \$14.50 for 9 pens and 5 notebooks. James bought 10 notebooks. How much did James pay for the notebooks?

Write your answer and your work or explanation in the space below.

- 42 Jasmine had some cards. She gave  $\frac{3}{11}$  of them to Lily and  $\frac{3}{4}$  of the remainder to Brooke. Jasmine received 38 new cards from her cousin and had 20 cards more than she had at first.

Maya said that Jasmine had 30 cards at first because  $38 - 20 = 18$ .

- Explain Maya's mistake.
- How many cards did Jasmine have at first?
- Explain how you arrived at your answer.

Write your answer and your work or explanation in the space below.

- 43 May started saving some pocket money on Monday. Each day, she saved \$0.40 more than the day before. She saved a total of \$12 from Monday to Friday. How much did May save on Friday?

Write your answer and your work or explanation in the space below.



A bus left a departure point with some passengers.

At the first stop,  $\frac{1}{8}$  of the passengers got off and 4 passengers boarded the bus.

At the second stop,  $\frac{1}{5}$  of the passengers got off and 4 passengers boarded the bus.

At the last stop,  $\frac{1}{4}$  of the passengers got off and 4 passengers boarded the bus.

There were 43 passengers on board in the end. How many passengers were on the bus when it left the departure point?

Write your answer and your work or explanation in the space below.



A silver bar has a mass of 50 grams. The cost of the silver bar is \$25, correct to the nearest dollar.

- What is the greatest possible cost of 1 gram of silver? Correct your answer to the nearest cent.
- Explain how you arrived at your answer.

Write your answer and your work or explanation in the space below.





# Assessment Guide

## End-of-Year Benchmark Assessment



### Section A Multiple-Choice Questions

(1 to 13 Part A,  
13 Part B, 14 Part A,  
14 Part B, 14 Part C,  
15 to 17 : 2 points each)

- 1 What is the value of  $54,000 \div 300$ ?

(A) 18  
(B) 180  
(C) 1,800  
(D) 18,000

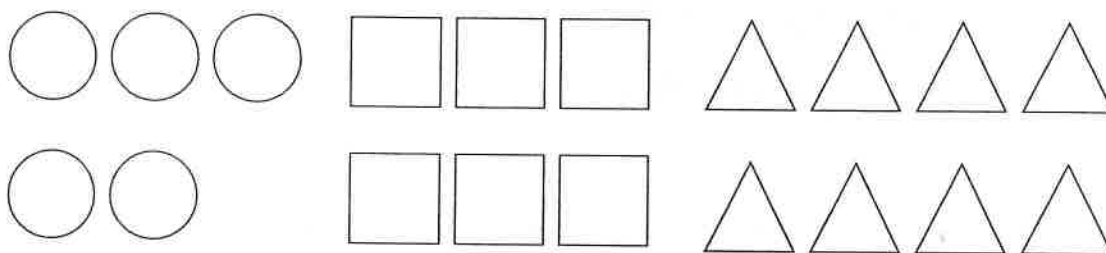
- 2 The ratio of pens and pencils in a classroom is 3 : 4. The number of pens is more than 40 but less than 60. What is a possible number of pencils in the classroom?

(A) 44  
(B) 48  
(C) 52  
(D) 56

- 3 What is  $2\frac{4}{13}$  less than 7?

(A)  $4\frac{4}{13}$   
(B)  $4\frac{9}{13}$   
(C)  $5\frac{4}{13}$   
(D)  $5\frac{9}{13}$

- 4 What is the ratio of the number of circles to the number of squares to the number of triangles?



- (A) 2 : 3 : 4  
(B) 4 : 3 : 2  
(C) 6 : 5 : 8  
(D) 5 : 6 : 8

- 5 What are the missing numbers?

$$24 : 8 : 36 = \underline{\quad} : \underline{\quad} : 9$$

- (A) 2; 6  
(B) 3; 4  
(C) 4; 3  
(D) 6; 2

- 6 Which of the following equations would be correct when the number 6 is entered in the box?

- (A)  $\frac{\square}{28} \div 12 = \frac{1}{56}$   
(B)  $\square \frac{1}{3} \times 3 = 9$   
(C)  $\frac{42}{\square} \times 5 = 30$   
(D)  $\frac{3}{8} \times 14 = \square$

7 What is the value of  $5\frac{3}{8}$  multiplied by 6?

(A)  $7\frac{1}{4}$

(B)  $11\frac{3}{8}$

(C)  $30\frac{3}{8}$

(D)  $32\frac{1}{4}$

8 There are 200 people in a movie theater. 180 of them are 16 years old and above. What percent of the people in the movie theater are below 16 years old?

(A) 10%

(B) 16%

(C) 50%

(D) 90%

9 Which of the following is equal to 1.025?  
Choose the **two** correct answers.

(A)  $1\frac{25}{100}$

(B)  $1 + (25 \times \frac{1}{10})$

(C)  $1 + \frac{1}{40}$

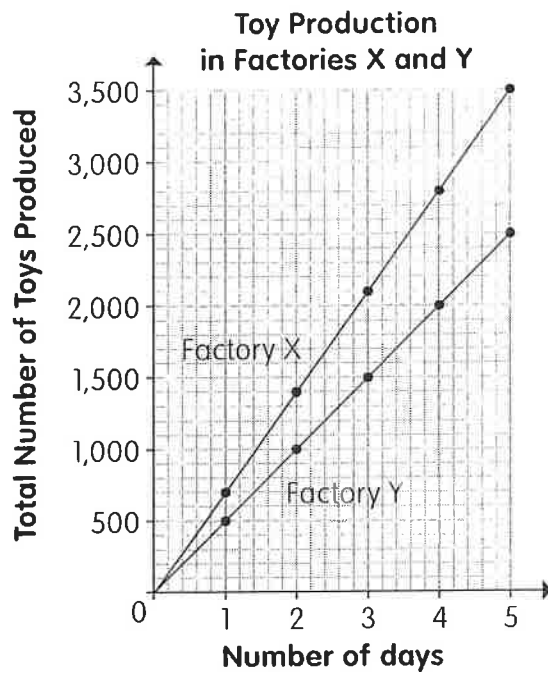
(D)  $(10 \times 0.1) + (2.5 \div 100)$

(E) one and twenty-five hundredths

- 10 The heights of a figurine and a mug are 7.5 inches and 3.3 inches respectively when rounded to the nearest tenth of an inch. The actual heights of the figurine and the mug are recorded to 2 decimal places. What is the greatest possible difference between the actual heights of the figurine and the mug?
- (A) 4.2 inches
  - (B) 4.24 inches
  - (C) 4.29 inches
  - (D) 4.3 inches
- 11 A rectangular prism measures 4 feet by 2 feet by 9 feet. What is its volume?
- (A) 8 cubic feet
  - (B) 18 cubic feet
  - (C) 36 cubic feet
  - (D) 72 cubic feet
- 12 In which number does the digit 8 have a value that is 200 times greater than the digit 4 in the number 31.974?
- (A) 5.38
  - (B) 5.87
  - (C) 18.92
  - (D) 80.37



This question has two parts.



### Part A

How many toys were produced by Factory X in 2 days?

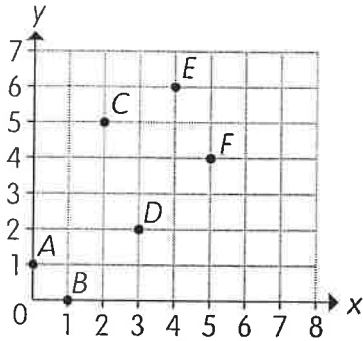
- ☐ A 500
- ☐ B 700
- ☐ C 1,000
- ☐ D 1,400

### Part B

How many days did it take Factory Y to produce 2,000 toys?

- ☐ A 1
- ☐ B 2
- ☐ C 3
- ☐ D 4

- 14 This question has three parts.



**Part A**

What are the coordinates of C?

- ☐ A (2, 3)
- ☐ B (3, 2)
- ☐ C (2, 5)
- ☐ D (5, 4)

**Part B**

What are the coordinates of E?

- ☐ A (2, 5)
- ☐ B (4, 6)
- ☐ C (5, 2)
- ☐ D (6, 4)

### Part C

The point  $G$  is 7 units to the right of the  $y$ -axis and 1 unit above the  $x$ -axis. Which statements correctly describe the position of point  $G$ ?

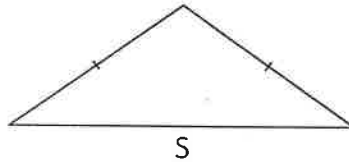
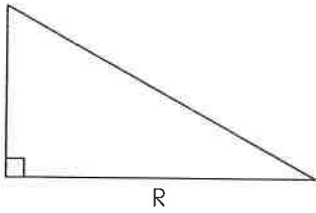
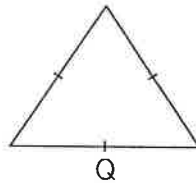
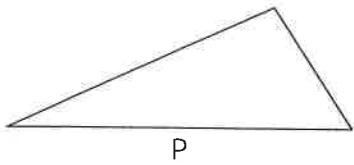
Choose the **two** correct answers.

- ☐ A The coordinates of point  $G$  are  $(7, 1)$ .
- ☐ B The coordinates of point  $G$  are  $(1, 7)$ .
- ☐ C Point  $G$  is 6 units to the right of  $A$ .
- ☐ D Point  $G$  is 3 units below  $F$ .
- ☐ E Points  $C$ ,  $F$ , and  $G$  form an obtuse triangle.

15 Which statement about shapes is true?

- ☐ A All squares are rectangles. Rectangles have opposite sides that are of equal in length.  
Therefore, all squares are rectangles.
- ☐ B Only some squares are rectangles. Rectangles have opposite sides that are not equal in length.  
Therefore, only squares with opposite sides that are not equal are rectangles.
- ☐ C Only some parallelograms are quadrilaterals. Quadrilaterals have four sides.  
Therefore, only parallelograms with four sides are quadrilaterals.
- ☐ D All rhombuses are parallelograms. Parallelograms have only 1 pair of parallel sides.  
Therefore, all rhombuses are parallelograms.

- 16 Which of the following is an equilateral triangle?



- (A) P
- (B) Q
- (C) R
- (D) S

- 17 Look at the patterns below.

Pattern X: 0, 8, 16, 24, 32, 40, 48

Pattern Y: 0, 4, 8, 12, 16, 20, 24

Which statement about Pattern X and Pattern Y is always true?

- (A) Each term in Pattern X is 2 times the corresponding term in Pattern Y.
- (B) Each term in Pattern X is half of the corresponding term in Pattern Y.
- (C) Each term in Pattern Y is 4 less than the corresponding term in Pattern X.
- (D) Each term in Pattern Y is 8 less than the corresponding term in Pattern X.



## Section B Short Answer Questions

(18 to 35) Part A, (36 to 45) Part B:  
2 points each

- 18 Find the product of 2.103 and 100.

Write your answer in the answer grid.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

- 19 Express  $3\frac{4}{25}$  as a decimal.

Write your answer in the answer grid.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

- 20 Express  $\frac{140}{700}$  as a percent.

Show your work and write your answer in the space below.

- 21 6 bottles contain 8 quarts of water in all. How many quarts of water are in each bottle? Give your answer as a mixed number in simplest form.

Show your work and write your answer in the space below.

- 22 Mr. Miller wanted to pack 10 kilograms of flour. He packed  $\frac{1}{2}$  kilogram of flour into each bag. How many bags of flour did he have in all?

Show your work and write your answer in the space below.

- 23 Mr. Davis prepared 5.4 liters of drink. The ratio of the amount of syrup to the amount of water used was 2 : 7. How many liters of water were used to make the drink?

Show your work and write your answer in the space below.

- 224 Morgan and Hailey ran a marathon. Morgan completed the marathon in  $5\frac{3}{5}$  hours while Hailey completed it  $1\frac{1}{2}$  hours after her. How long did Hailey take to complete the marathon?

Show your work and write your answer in the space below.

- 25 Class A, Class B and Class C collected \$1,400 in donations in total for a charity. Class A collected \$420 and Class B collected \$350. What is the ratio of the amount of donation collected by Class A to the amount of donation collected by Class B to the amount of donation collected by Class C in simplest form?

Show your work and write your answer in the space below.

- 26 The ratio of the amount of flour to the amount of butter needed to bake a cake was 8 : 3. The mass of butter used was 240 grams. How much flour were needed to bake the cake?

Show your work and write your answer in the space below.

- 27 There are 42 students in a class.  $\frac{4}{7}$  of the students are girls.  
 $\frac{5}{6}$  of the boys in the class have a pet.  
Sofia finds the number of boys who have a pet as shown.

$$\frac{4}{7} \times 42 = 24$$

There are 24 boys in the class.

$$\frac{5}{6} \times 24 = 20$$

The number of boys who have a pet is 20.

Explain Sofia's mistake. What should the correct answer be?

Show your work and write your answer in the space below.

- 28 Yong has two bags of fruit. One bag weighs  $15\frac{2}{7}$  pounds while the other bag weighs  $10\frac{5}{8}$  pounds. What is the difference in weight between the two bags?

Show your work and write your answer in the space below.

- 29 Mr. Walker earns \$3,000 each month. He uses 45% of his salary to pay household bills, 30% on transport, and saves the rest of it. How much does Mr. Walker save each month?

Show your work and write your answer in the space below.



- 30 A supermarket received a delivery of 500 eggs. 80% of the eggs were chicken eggs and the rest were duck eggs. How many duck eggs were delivered?

Show your work and write your answer in the space below.

- 31 At a meeting, each person shook hands with another person once only. There were 5 people at the meeting. How many handshakes were made in all?

Show your work and write your answer in the space below.

- 32 For a Science quiz, 2 marks were awarded for every correct answer and 1 mark was deducted for every wrong answer. A student had  $\frac{5}{6}$  of the quiz correct. How many questions were there in the quiz if the student scored 180 marks in all?

Show your work and write your answer in the space below.

- 33 Mr. Cooper bought 10 apples and 15 lemons for \$14.50. The total cost of an apple and a lemon was \$1.05. How much did each lemon cost?

Show your work and write your answer in the space below.

- 34 A rectangular tank, 60 centimeters by 50 centimeters by 35 centimeters, is  $\frac{3}{5}$  filled with water. 48.5 liters of water are drained from the tank. Luna finds the volume of water left in the tank as shown.

$$\begin{aligned}\text{Capacity of tank} &= 60 \times 50 \times 35 \\ &= 105,000 \text{ cm}^3 \\ &= 105,000 \text{ mL} \\ &= 105 \text{ L}\end{aligned}$$

$$\begin{aligned}\text{Volume of water left in the tank} &= 105 - 48.5 \\ &= 56.5 \text{ L}\end{aligned}$$

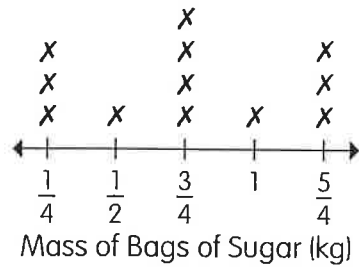
Which step is wrong? Explain. What should the correct answer be?

Show your work and write your answer in the space below.



This question has two parts.

The line plot shows the masses of sugar in 12 bags.  
Each  $\times$  represents 1 bag of sugar.



### Part A

Fill the table below with the information given by the line plot.

Mass of sugar (kg)					
Number of bags					

### Part B

Jack says that he needs 10 kilograms of sugar for baking.

Is there enough sugar in the 12 bags? Explain.

Show your work and write your answer in the space below.

## Section C Constructed Response

(36 to 40): 4 points each

- 36 Joy had some magnets. She kept  $\frac{1}{2}$  of the magnets and an extra 2 for herself, and gave the remainder to Hailey. Hailey kept  $\frac{1}{3}$  of the magnets and an extra 6 magnets for herself, and gave the rest to Kyra. Kyra gave away  $\frac{2}{5}$  of her magnets and had 12 magnets left. How many magnets did Joy have at first?

Write your answer and your work or explanation in the space below.

- 37 Caleb bought 2 green ring files that cost \$3.50 each and 4 pink ring files that cost \$3.30 each. He gave the cashier \$22. Caleb found the amount of change received as shown.

$$2 + 4 = 6$$

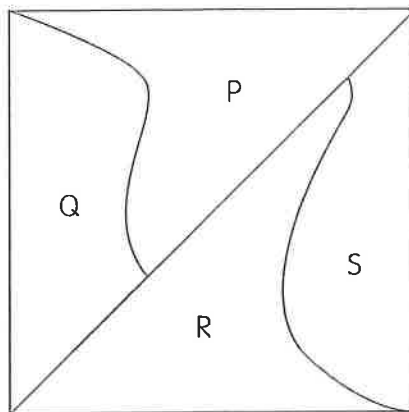
$$\begin{aligned} \$22 - (6 \times \$3.50) &= \$22 - \$21 \\ &= \$1 \end{aligned}$$

The amount of change received was \$1.

- Explain Caleb's mistake.
- What should the correct answer be?
- Explain how you arrived at your answer.

Write your answer and your work or explanation in the space below.

- 38 Miguel wants to design a square greeting card as shown below. The ratio of Area P to Area Q is 2 : 3. The ratio of Area R to Area S is 5 : 4. Find the ratio of Area P to Area S. Express the ratio in simplest form.



Write your answer and your work or explanation in the space below.

39 This question has two parts.

Two factories, Factory A and Factory B, assemble a different number of computers every 10 minutes. Factory A assembles 8 computers every 10 minutes.

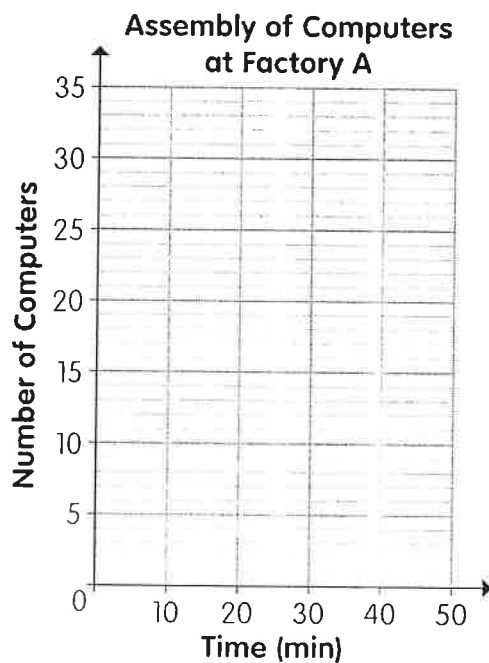
### Part A

Complete the number pattern.

Write your answer in the tables below.

Factory A				
Time (min)	10	20	30	40
Number of computers	8			

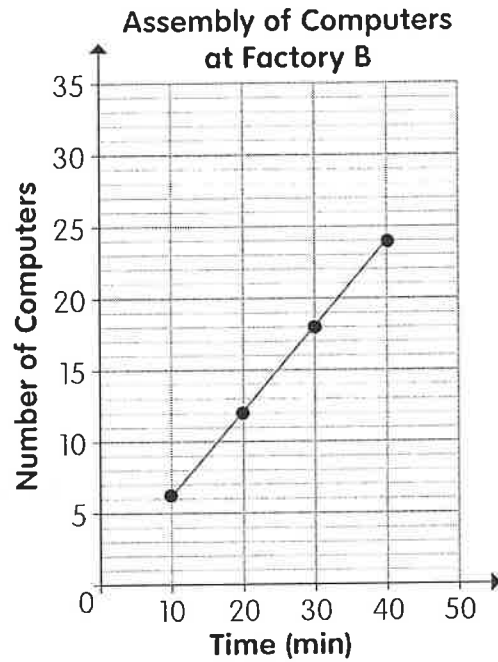
Plot each point on a coordinate plane and make a line graph below.





### Part B

The graph shows the number of computers Factory B assembles in 40 minutes.



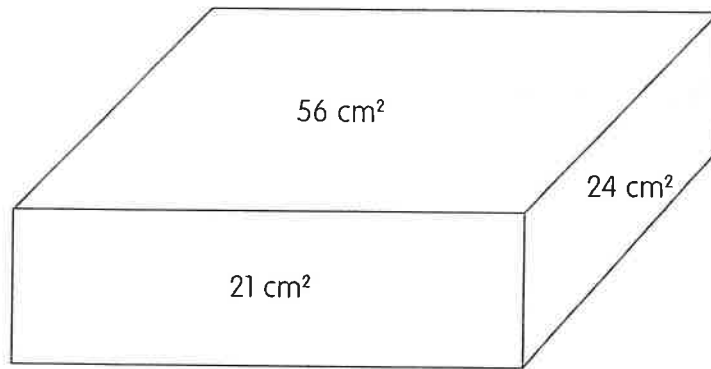
Use the data in the graph to fill in the table.

Factory B				
Time (min)	10	20	30	40
Number of computers				

Which factory is faster? Explain.

Write your answer and your work or explanation in the space below.

- 40 The figure shows a rectangular wooden block. The areas of the faces are 21 square centimeters, 24 square centimeters and 56 square centimeters.



- What is the volume of the wooden block?

Aiden wants to cut as many 2-centimeter wooden cubes from the block as possible. He says that he can cut 21 wooden cubes.

- Explain Aiden's mistake.

Write your answer and your work or explanation in the space below.