Name: _____ Date: _____



Assessment Guide
End-of-Year Benchmark Assessment

100

Suggested Time: 90 min

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 ÷ 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?

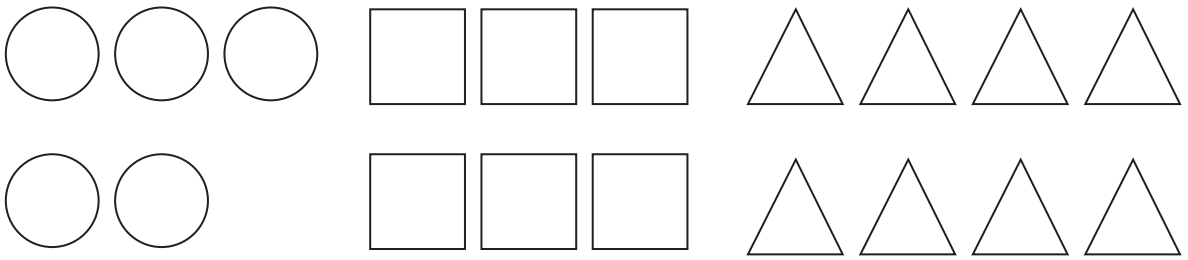
(A) 44
(B) 48
(C) 52
(D) 56

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) $5\frac{9}{13}$

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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 = _____ : _____ : 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 $\frac{3}{8} \times 14 = \square$

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

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

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

E one and twenty-five hundredths

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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?

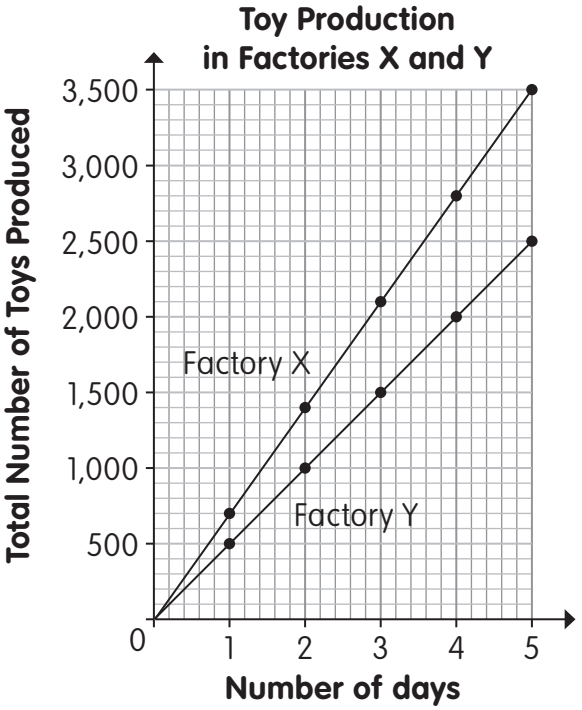
(A) 8 cubic feet
(B) 18 cubic feet
(C) 36 cubic feet
(D) 72 cubic feet

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

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13 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

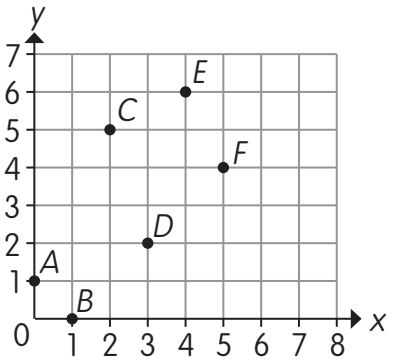
Part B

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

(A) 1
(B) 2
(C) 3
(D) 4

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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)

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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.

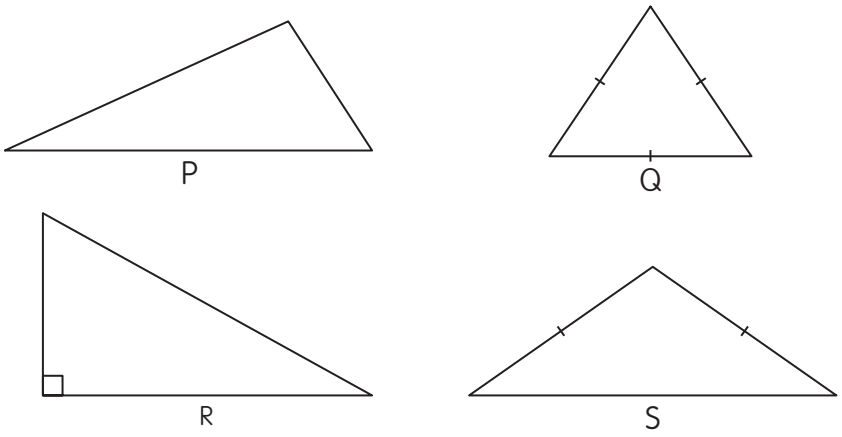
B Only some squares are rectangles. Rectangles have opposite sides that are not equal in length.
Therefore, only squares with opposite sides that are not equal are rectangles.

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.

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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.

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Section B Short Answer Questions

(18 to 35 Part A, 35 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

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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.

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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.

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24 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.

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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.

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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.

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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.

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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.

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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.

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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.

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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.

Capacity of tank = 60 × 50 × 35

= 105,000 cm^3

= 105,000 mL

= 105 L

Volume of water left in the tank = 105 – 48.5

= 56.5 L

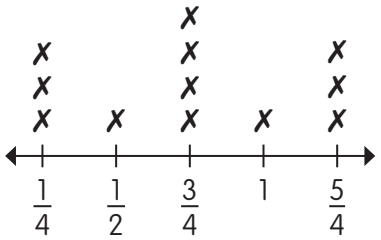
Which step is wrong? Explain. What should the correct answer be?

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

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35 This question has two parts.

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



Mass of Bags of Sugar (kg)

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.

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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.

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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.

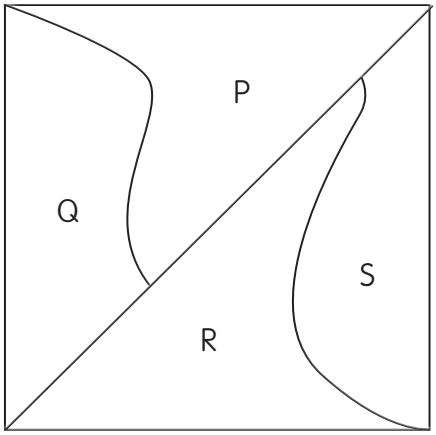
$2 + 4 = 6$
$\$22 - (6 \times \$3.50) = \$22 - \$21$
$= \$1$
The amount of change received was $1.

- 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.

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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.

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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.

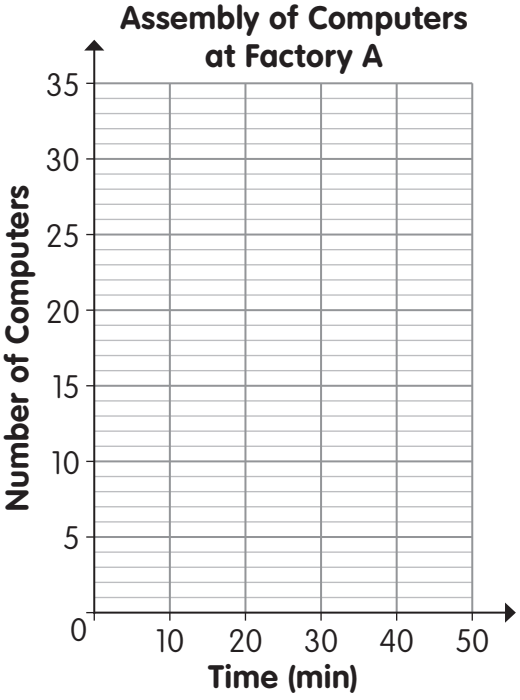
Part A

Complete the number pattern.

Write your answer in the tables below.

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

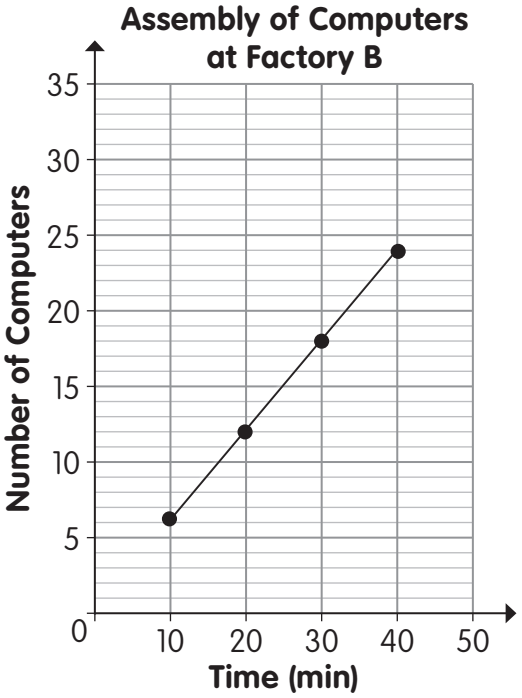
Plot each point on a coordinate plane and make a line graph below.



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Part B

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



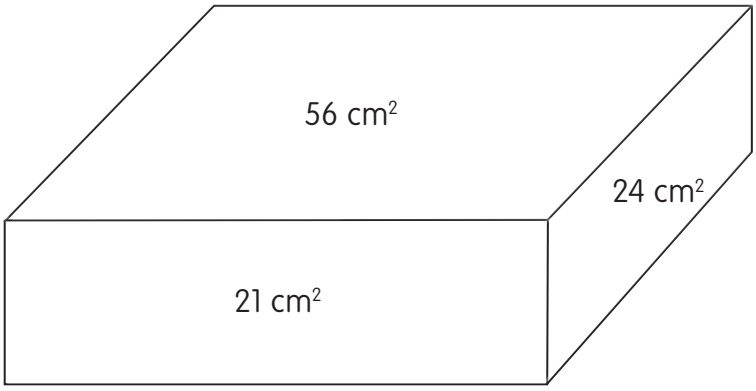
Use the data in the graph to fill in the table.

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.

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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.

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End-of-Year Benchmark Assessment

Section A

1. B
2. D
3. B
4. D
5. D
6. A
7. D
8. A
9. C and D
10. C
11. D
12. B
13. **Part A:** D
    Part B: D
14. **Part A:** C
    Part B: B
    Part C: A and E
15. A
16. B
17. A

Section B

18. 210.3
19. 3.16
20.

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **20%** Modeling component: The student shows correct expression of fraction as a percent. Example: $\frac{140}{700} = \frac{20}{100}$ $= 20\%$
1	Student response includes 1 of the 2 elements. Or, the student has a computation error, but provides a valid strategy.
0	Student response is incorrect or irrelevant.

21.

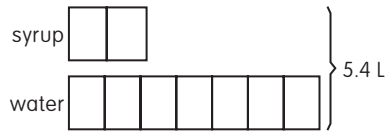
Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: $\mathbf{1\frac{1}{3}}$ **qt** Modeling component: The student shows correct rewriting of division expression as fraction and mixed number. Example: Amount of water in each bottle $= 8 \div 6$ $= \frac{8}{6}$ $= 1\frac{2}{6}$ $= 1\frac{1}{3}$ qt
1	Student response includes 1 of the 2 elements. Or, the student has a computation error, but provides a valid strategy.
0	Student response is incorrect or irrelevant.

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22

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **20** Modeling component: The student shows correct division of a whole number by a fraction. Example: Number of bags of flour $= 10 \div \frac{1}{2}$ $= 10 \times 2$ $= 20$
1	Student response includes 1 of the 2 elements. Or, the student has a computation error, but provides a valid strategy.
0	Student response is incorrect or irrelevant.

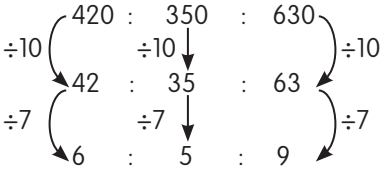
23

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **4.2 L** Modeling component: The student shows correct use of division and multiplication. Example:  9 units = 5.4 L 1 unit = 5.4 ÷ 9 = 0.6 L 7 units = 0.6 × 7 = 4.2 L 4.2 liters of water were used to make the drink.
1	Student response includes 1 of the 2 elements. Or, the student has a computation error, but provides a valid strategy.
0	Student response is incorrect or irrelevant.

24

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **$7\frac{1}{10}$ h** Modeling component: The student shows correct use of addition. Example: Time Hailey took $= 5\frac{3}{5} + 1\frac{1}{2}$ $= 5\frac{6}{10} + 1\frac{5}{10}$ $= 6\frac{11}{10}$ $= 7\frac{1}{10}$ h
1	Student response includes 1 of the 2 elements. Or, the student has a computation error, but provides a valid strategy.
0	Student response is incorrect or irrelevant.

25

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **6 : 5 : 9** Modeling component: The student shows correct work to find the answer. Example: Amount that Class C collected = \$1,400 – \$420 – \$350 = \$630 Class A : Class B : Class C 
1	Student response includes 1 of the 2 elements. Or, the student has a computation error, but provides a valid strategy.
0	Student response is incorrect or irrelevant.

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26

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **640 g** Modeling component: The student shows correct use of multiplication to find equivalent ratios. Example: Amount of flour : Amount of butter $\times 80$ (8 : 3) $\times 80$ (640 : 240) 640 grams of flour were needed to bake the cake.
1	Student response includes 1 of the 2 elements. Or, the student has a computation error, but provides a valid strategy.
0	Student response is incorrect or irrelevant.

27

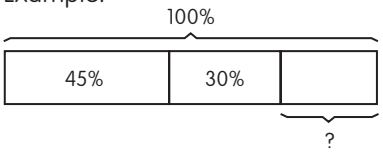
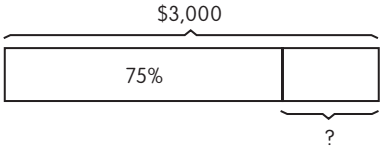
Score	Rubric
2	Student response includes each of the following 2 elements: Reasoning component: The student correctly identifies Sofia's mistake. Modeling component: The student shows correct work to find the answer. Example: Sofia's answer is wrong because she worked out the number of girls instead of the number of boys in the first part of the solution. Fraction of the class that are boys $= 1 - \frac{4}{7}$ $= \frac{3}{7}$ Number of boys in the class $= \frac{3}{7} \times 42$ $= 18$ Number of boys who have a pet $= \frac{5}{6} \times 18$ $= 15$
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.

28

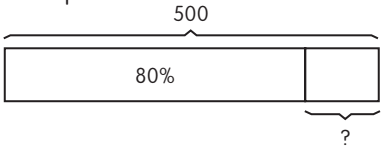
Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **$4\frac{37}{56}$ lb** Modeling component: The student shows correct use of subtraction. Example: Difference in weight $= 15\frac{2}{7} - 10\frac{5}{8}$ $= 15\frac{16}{56} - 10\frac{35}{56}$ $= 14\frac{72}{56} - 10\frac{35}{56}$ $= 4\frac{37}{56}$ lb
1	Student response includes 1 of the 2 elements. Or, the student has a computation error, but provides a valid strategy.
0	Student response is incorrect or irrelevant.

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29

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **$750** Modeling component: The student shows correct work to find the answer. Example:  100% – 45% – 30% = 25%  25% of $3,000 $= \frac{25}{100} \times \$3{,}000$ $= \$750$ Mr. Walker saves $750 each month.
1	Student response includes 1 of the 2 elements. Or, the student has a computation error, but provides a valid strategy.
0	Student response is incorrect or irrelevant.

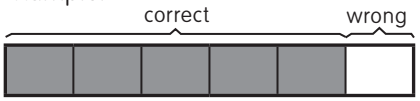
30

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **100** Modeling component: The student shows correct work to find the answer. Example:  $80\% \times 500 = \frac{80}{100} \times 500$ $= 400$ $500 - 400 = 100$ 100 duck eggs were delivered.
1	Student response includes 1 of the 2 elements. Or, the student has a computation error, but provides a valid strategy.
0	Student response is incorrect or irrelevant.

31

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **10** Modeling component: The student shows correct work to find the answer. Example: A person could not shake hands with himself or herself. If Person 1 shook hands with Person 2, this is counted as 1 handshake.  There were 10 handshakes made in all.
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.

32

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **120** Modeling component: The student shows correct work to find the answer. Example:  Number of marks awarded for 5 units of correct answers = 5 × 2 = 10 Number of marks deducted for 1 unit of wrong answers = 1 10 – 1 = 9 9 units = 180 1 unit = 180 ÷ 9 = 20

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2	6 units = 6 × 20 = 120 There were 120 questions in the quiz.
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.

33

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **$0.80** Modeling component: The student shows correct work to find the answer. Example: Cost of 10 apples and 10 lemons = 10 × $1.05 = $10.50 Cost of 5 lemons = $14.50 – 10.50 = $4 $4 ÷ 5 = $0.80 Each lemon cost $0.80.
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.

34

Score	Rubric
2	Student response includes each of the following 2 elements: Reasoning component: The student correctly identifies Luna's mistake. Modeling component: The student shows correct work to find the answer. Example: The second step is incorrect because Luna subtracted 48.5 L from the capacity of the tank instead of subtracting from the volume of water in the tank at first. Volume of water in the tank at first $= \frac{3}{5} \times 60 \times 50 \times 35$ = 63,000 cm^3 = 63 L Volume of water left in the tank = 63 – 48.5 = 14.5 L
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.

35 **Part A**

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **Mass of sugar (kg)**: $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $\frac{5}{4}$ **Number of bags**: 3, 1, 4, 1, 3
1	Student response includes at least 3 pairs of correct answers.
0	Student response is incorrect or irrelevant.

Part B

Score	Rubric
2	Student response includes each of the following 2 elements: Modeling component: The student shows correct work to find the answer. Reasoning component: The student correctly identifies that there is insufficient sugar in the 12 bags. Example: Total mass of sugar in 12 bags $= \left(3 \times \frac{1}{4}\right) + \left(1 \times \frac{1}{2}\right) + \left(4 \times \frac{3}{4}\right) +$ $(1 \times 1) + \left(3 \times \frac{5}{4}\right)$ = 9 kg 9 kg is less than 10 kg. So, there is not enough sugar in the 12 bags.
1	Student response includes 1 of the 2 elements. Or, the student has a computation error, but provides a valid strategy.
0	Student response is incorrect or irrelevant.

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Section C

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Score	Rubric
4	Student response includes each of the following 4 elements: Computation component: **82** Modeling component: The student shows correct work to find the number of magnets Kyra received. Modeling component: The student shows correct work to find the number of magnets Hailey received. Modeling component: The student shows correct work to find the number of magnets Joy had at first. Example: $\frac{3}{5}$ of Kyra's magnets = 12 $\frac{1}{5}$ of Kyra's magnets = 12 ÷ 3 = 4 $\frac{5}{5}$ of Kyra's magnets = 4 × 5 = 20 Kyra received 20 magnets. $\frac{2}{3}$ of Hailey's magnets = 20 + 6 = 26 $\frac{1}{3}$ of Hailey's magnets = 26 ÷ 2 = 13 $\frac{3}{3}$ of Hailey's magnets = 13 × 3 = 39 Hailey received 39 magnets. $\frac{1}{2}$ of Joy's magnets = 39 + 2 = 41 $\frac{2}{2}$ of Hailey's magnets = 41 × 2 = 82 Joy had 82 magnets at first.
3	Student response includes 3 of the 4 elements.
2	Student response includes 2 of the 4 elements.
1	Student response includes 1 of the 4 elements.
0	Student response is incorrect or irrelevant.

37

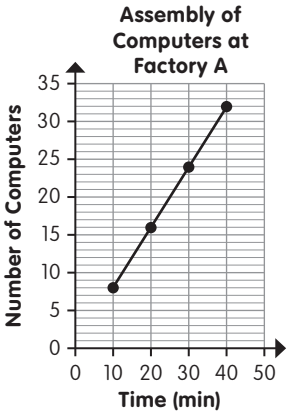
Score	Rubric
4	Student response includes each of the following 4 elements: Reasoning component: The student correctly identifies Caleb's mistake. Computation component: **$1.80** Modeling component: The student shows correct use of multiplication. Modeling component: The student shows correct use of addition and subtraction. Example: Caleb is incorrect because he calculated a wrong total cost of 6 × $3.50 = $21. Cost of 2 green ring files = 2 × $3.50 = $7 Cost of 4 pink ring files = 4 × $3.30 = $13.20 Total cost = $7 + $13.20 = $20.20 Change received = $22 – $20.20 = $1.80
3	Student response includes 3 of the 4 elements. Or, the student has a computation error, but provides a valid strategy.
2	Student response includes 2 of the 4 elements.
1	Student response includes 1 of the 4 elements.
0	Student response is incorrect or irrelevant.

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Score	Rubric
4	Student response includes each of the following 4 elements: Computation component: **9 : 10** Modeling component: The student shows correct use of multiplication to find the equivalent ratio of Area P to Area Q. Modeling component: The student shows correct use of multiplication to find the equivalent ratio of Area R to Area S. Modeling component: The student correctly expresses the ratio of Area P to Area S in simplest form. Example: Area P + Area Q : Area R + Area S = 1 : 1 Area P : Area Q = 2 : 3 = 18 : 27 (Total = 45 units) Area R : Area S = 5 : 4 = 25 : 20 (Total = 45 units) The ratio of Area P to Area S is 18 : 20 = 9 : 10.
3	Student response includes 3 of the 4 elements.
2	Student response includes 2 of the 4 elements.
1	Student response includes 1 of the 4 elements.
0	Student response is incorrect or irrelevant.

39 **Part A**

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **Factory A** Time (min): 10, 20, 30, 40 Number of computers: 8, 16, 24, 32 Modeling component: The student correctly plots the line graph for Factory A. Example: 
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.

Part B

Score	Rubric
2	Student response includes each of the following 2 elements: Computation component: **Factory B** Time (min): 10, 20, 30, 40 Number of computers: **6**, **12**, **18**, **24** Reasoning component: The student correctly identifies that Factory A is faster.

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	Example: Factory B assembles 6 computers every 10 minutes. So, Factory A is faster.
1	Student response includes 1 of the 2 elements.
0	Student response is incorrect or irrelevant.

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Score	Rubric
4	Student response includes each of the following 4 elements: Computation component: **168 cm^3** Modeling component: The student shows correct work to find the volume of the wooden block. Reasoning component: The student correctly identifies that Aiden is incorrect. Modeling component: The student shows correct work to find the answer. Example: 21 = 7 × 3 24 = 3 × 8 56 = 8 × 7 Hence, the dimensions of the wooden block are 7 centimeters by 8 centimeters by 3 centimeters. Volume of wooden block = 7 × 8 × 3 = 168 cm^3 Aiden took the total volume of the wooden block and divided it by the volume of each wooden cube. Number of cubes that can be cut along the length = 3 Number of cubes that can be cut along the breadth = 4 Number of cubes that can be cut along the height = 1 Number of 2-cm cubes that can be cut from the block = 3 × 4 × 1 = 12
3	Student response includes 3 of the 4 elements.
2	Student response includes 2 of the 4 elements.
1	Student response includes 1 of the 4 elements.
0	Student response is incorrect or irrelevant.

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