Name _____   Date _____

The table to the right shows how much time it takes each of the 5 students to do 15 jumping jacks.

Maya	16 seconds
Riley	15 seconds
Jake	14 seconds
Nicholas	15 seconds
Adeline	17 seconds

a. Who finished 15 jumping jacks the fastest?

Jake was the fastest.

b. Who finished their jumping jacks in the exact same amount of time?

Riley and Nicholas finished in the same amount of time.

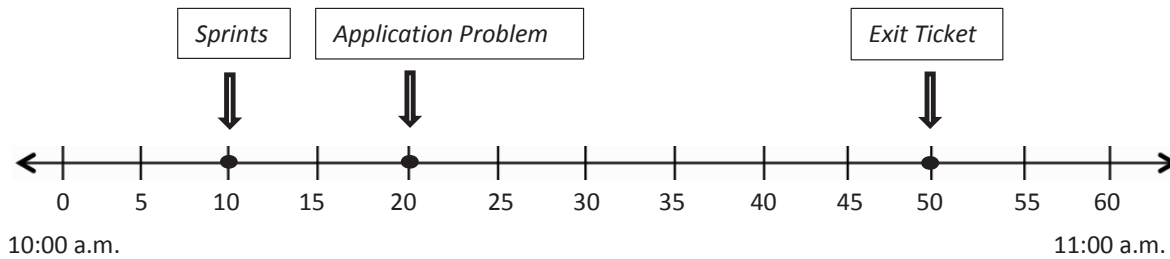c. How many seconds faster did Jake finish than Adeline?

Jake: 14 seconds

Adeline: 17 seconds

Jake finished 3 seconds faster than Adeline.

EUREKA MATH™

Lesson 1:   Explore time as a continuous measurement using a stopwatch.

20

Name _____ Date _____

The number line below shows a math class that begins at 10:00 a.m. and ends at 11:00 a.m. Use the number line to answer the following questions.

| Sprints | Application Problem | | Exit Ticket |

0   5   10   15   20   25   30   35   40   45   50   55   60

10:00 a.m.   11:00 a.m.

a. What time do Sprints begin?

   10:10 am

b. What time do students begin the Application Problem?

   10:20 am

c. What time do students work on the Exit Ticket?

   10:50 am

d. How long is math class?

   60 min or 1 hour

EUREKA MATH

Lesson 2:   Relate skip-counting by fives on the clock and telling time to a continuous measurement model, the number line.

32

Name _____ Date _____

The clock shows what time Jason gets to school in the morning.

Arrival at School

a. What time does Jason get to school?

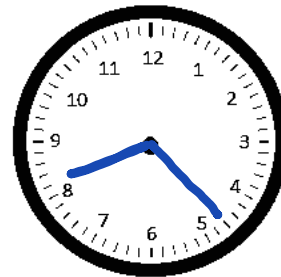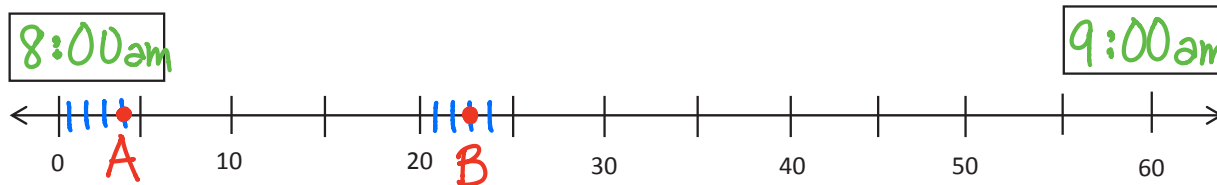**8:04 am**

b. The first bell rings at 8:23 a.m. Draw hands on the clock to show when the first bell rings.

First Bell Rings

NOTE: The exact placement of the hour hand is not as important as the minute hand.

c. Label the first and last tick marks 8:00 a.m. and 9:00 a.m. Plot a point to show when Jason arrives at school. Label it *A*. Plot a point on the line when the first bell rings and label it *B*.

8:00am   **9:00am**

0   A   10   20   B   30   40   50   60

EUREKA
MATH

Lesson 3:   Count by fives and ones on the number line as a strategy to tell time to
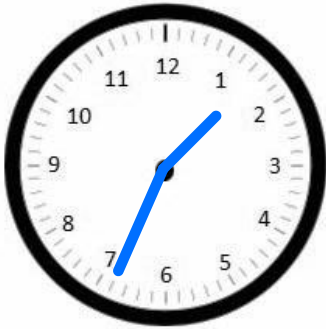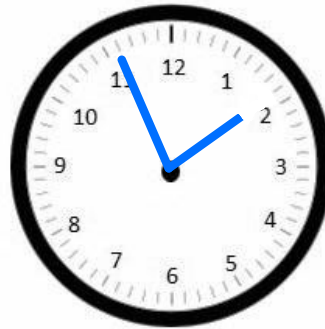the nearest minute on the clock.

45

Name _____   Date _____

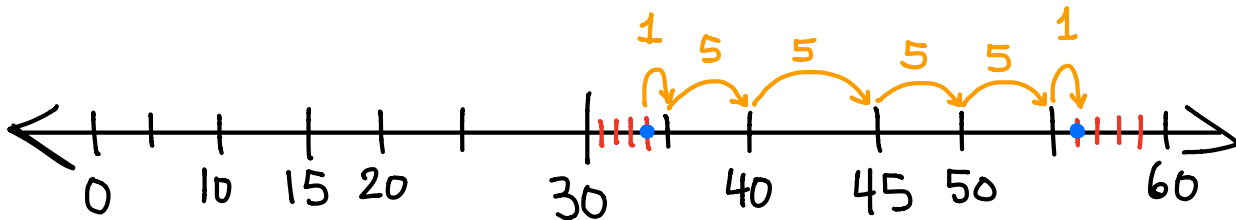Independent reading time starts at 1:34 p.m. It ends at 1:56 p.m.

1. Draw the start time on the clock below.

2. Draw the end time on the clock below.

3. How many minutes does independent reading time last?

Independent reading time takes 22 minutes.

EUREKA MATH   **Lesson 4:**   Solve word problems involving time intervals within 1 hour by counting backward and forward using the number line and clock.   **56**

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Name _____   Date _____

Michael spends 19 minutes on his math homework and 17 minutes on his science homework.

How many minutes does Michael spend doing his homework?

Model the problem on the number line, and write an equation to solve.
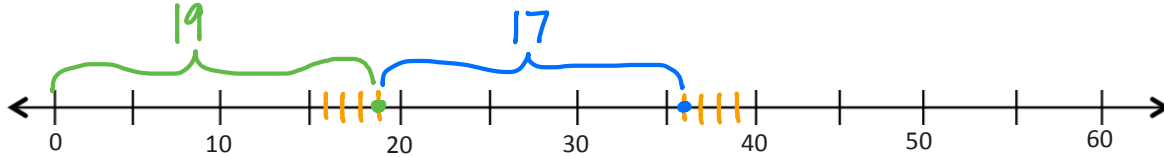
19 + 17 = time doing homework

Michael spends __36__ minutes on his homework.

$$
\begin{array}{r}
\overset{1}{1}\,9 \\
+\,1\,7 \\
\hline
3\,6
\end{array}
$$

Name _____ Date _____

Ten bags of sugar weigh 1 kilogram. How many grams does each bag of sugar weigh?

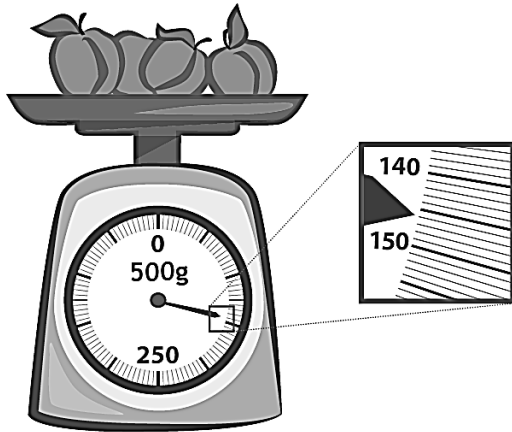|	
100 g	100 g
100 g	100 g
100 g	100 g
100 g	100 g
100 g	100 g

$1,000 g = 1 kg$

Each bag of sugar weighs 100 g.

EUREKA MATH™

Lesson 6:   Build and decompose a kilogram to reason about the size and weight
of 1 kilogram, 100 grams, 10 grams, and 1 gram.
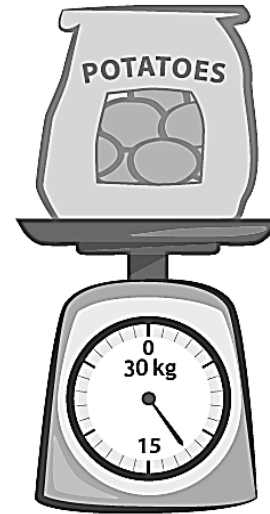
81

Name _____   Date _____

1. Read and write the weights below. Write the word *kilogram* or *gram* with the measurement.

<u>146 gram</u>   <u>12 kilogram</u>

2. Circle the correct unit of weight for each estimation.

   a. An orange weighs about 200 (grams / kilograms).

   b. A basketball weighs about 624 (grams / kilograms).

   c. A brick weighs about 2 (grams / kilograms).

   d. A small packet of sugar weighs about 4 (grams / kilograms).

   e. A tiger weighs about 190 (grams / kilograms).

EUREKA MATH

Lesson 7:   Develop estimation strategies by reasoning about the weight in kilograms of a series of familiar objects to establish mental benchmark measures.

92

Name _____   Date _____

The weights of a backpack and suitcase are shown below.

7 kg   21 kg

a. How much heavier is the suitcase than the backpack?

$$\begin{array}{r} 2\cancel{1} \\ -\ 7 \\ \hline 1\ 4 \end{array}$$

The suitcase is 14 kg heavier than the backpack.

b. What is the total weight of 4 identical backpacks?

$7+7+7+7 = 28\ kg$ Four backpacks would weigh 28 kg.

c. How many backpacks weigh the same as one suitcase?

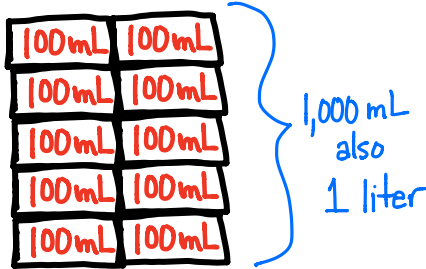$7+7+7=21$ Three backpacks weigh the same as one backpack.

Name _____   Date _____

1. Morgan fills a 1-liter jar with water from the pond. She uses a 100-milliliter cup to scoop water out of the pond and pour it into the jar. How many times will Morgan scoop water from the pond to fill the jar?

100mL 100mL
100mL 100mL
100mL 100mL   } 1,000 mL
100mL 100mL   also
100mL 100mL   1 liter

Since 10 × 100 = 1000, we know Morgan will scoop water 10 times.

2. How many groups of 10 milliliters are in 1 liter? Explain.

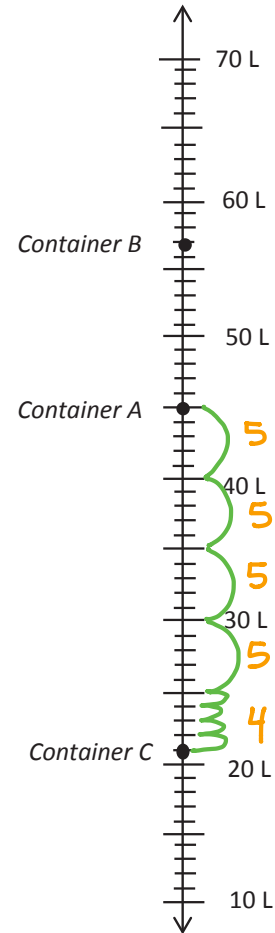1 liter = 1,000 mL

10 × [100] = 1,000

There are ___100___ groups of 10 milliliters in 1 liter.

Name _____   Date _____

1. Use the number line to record the capacity of the containers.

Container	Capacity in Liters
A	45 L
B	57 L
C	21 L

2. What is the difference between the capacity of Container A and Container C?

Container A holds 24 L more than Container C.

$$
\begin{array}{r}
45 \\
-21 \\
\hline
24\ L
\end{array}
$$

Name _____   Date _____

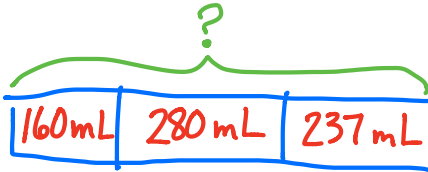The capacities of three cups are shown below.

Cup A
160 mL

Cup B
280 mL

Cup C
237 mL

a.   Find the total capacity of the three cups.

?

| 160 mL | 280 mL | 237 mL |

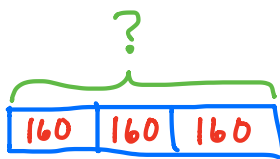$$\begin{array}{r} 160 \\ 280 \\ + 237 \\ \hline 677 \end{array}$$

Total capacity: 677 mL

b.   Bill drinks exactly half of Cup B. How many milliliters are left in Cup B?

280

| 140 | 140 |

There are 140 mL left in the cup.

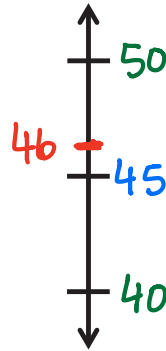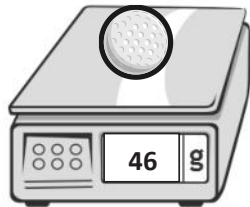c.   Anna drinks 3 cups of tea from Cup A. How much tea does she drink in total?

?

| 160 | 160 | 160 |

$$\begin{array}{r} 160 \\ 160 \\ + 160 \\ \hline 480 \end{array}$$

Anna drinks 480 mL of tea.

EUREKA MATH   Lesson 11:   Solve mixed word problems involving all four operations with grams,   133
                                 kilograms, liters, and milliliters given in the same units.

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Name _____   Date _____

The weight of a golf ball is shown below.


50

46 –

45

40

a. The golf ball weighs ____46 g____.

b. Round the weight of the golf ball to the nearest ten grams. Model your thinking on the number line.

c. The golf ball weighs about ____50 g____.

d. Explain how you used the halfway point on the number line to round to the nearest ten grams.

46 is between 40 and 50. 45 is halfway between those tens.
46 is above 45, so it rounds to 50.

EUREKA MATH

Lesson 12: Round two-digit measurements to the nearest ten on the vertical number line.

156

Name _____   Date _____

1. Round to the nearest ten. Use the number line to model your thinking.

a. 26 ≈ __**30**__

30

26— **25**

20

b. 276 ≈ __**280**__

280

276— **275**

270
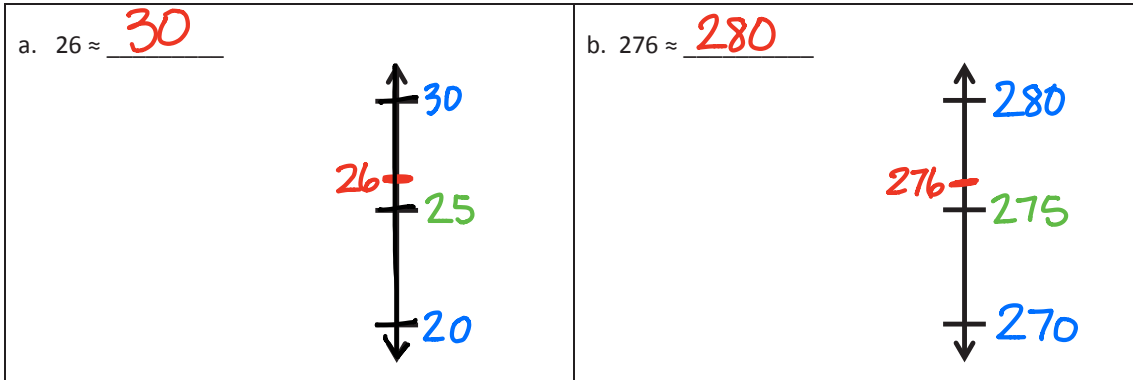
2. Bobby rounds 603 to the nearest ten. He says it is 610. Is he correct? Why or why not? Use a number line and words to explain your answer.
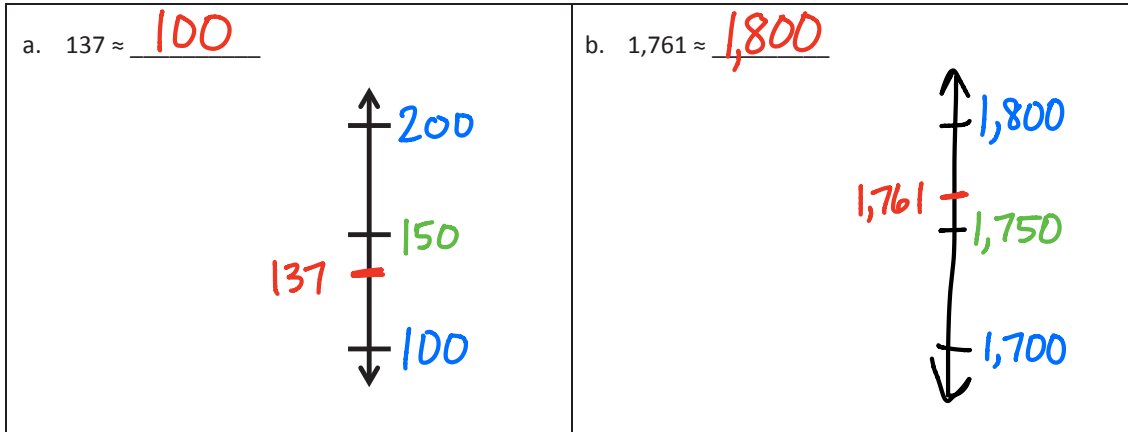
610

605

603 —

600
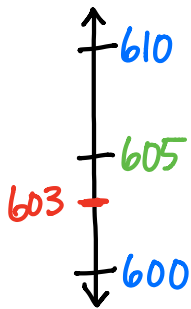
603 is between 600 and 610. 605 is halfway between those tens. Since 603 is below 605, it rounds to 600, not 610. So, Bobby is incorrect.
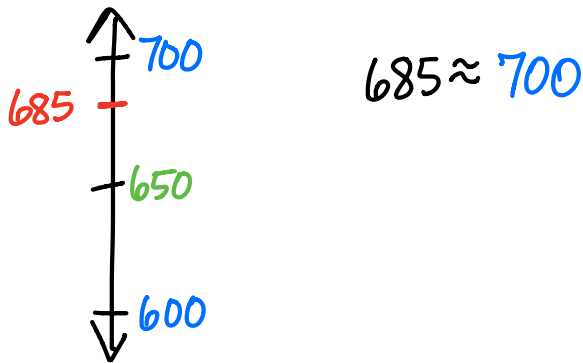
Name _____   Date _____

1. Round to the nearest hundred. Use the number line to model your thinking.

   a. 137 ≈ __100__

   200
   150
   137 –
   100

   b. 1,761 ≈ __1,800__

   1,800
   1,761 –
   1,750
   1,700

2. There are 685 people at the basketball game. Draw a vertical number line to round the number of people to the nearest hundred people.

   700
   685 –
   650
   600

   685 ≈ 700

Name _____ Date _____

1. Find the sums below. Choose mental math or the algorithm.

   a. 24 cm + 36 cm

   6 30 (branches from 36)

   24 + 6 = 30
   30 + 30 = 60

   60cm

   b. 562 m + 180 m

   562
   + 180
   742

   742 m

   c. 345 km + 239 km

   345
   + 239
   584

   584 km

2. Brianna jogs 15 minutes more on Sunday than Saturday. She jogged 26 minutes on Saturday.

   a. How many minutes does she jog on Sunday?

   saturday [26]
   sunday [26][15]

   26
   + 15
   41
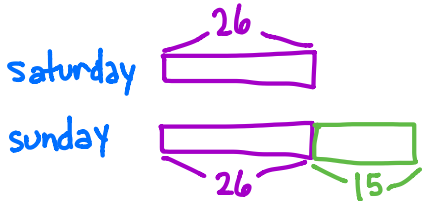
   She jogged 41 minutes on Sunday.

   b. How many minutes does she jog in total?

   41
   + 26
   67

   She jogged 67 minutes in total.

Name _____   Date _____

1. Find the sums.

a. 78 g + 29 g

$$\begin{array}{r} 78 \\ + \ 29 \\ \hline 107 \end{array}$$

107g

b. 328 kg + 289 kg

$$\begin{array}{r} 328 \\ +289 \\ \hline 617 \end{array}$$

617 kg
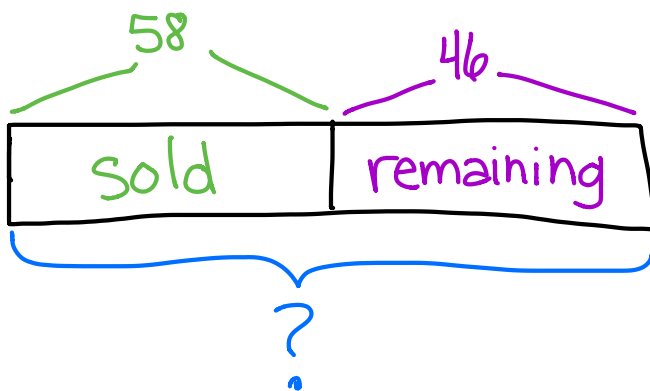
c. 509 L + 293 L

$$\begin{array}{r} 509 \\ +293 \\ \hline 802 \end{array}$$

802 L

2. The third-grade class sells lemonade to raise funds. After selling 58 liters of lemonade in 1 week, they still have 46 liters of lemonade left. How many liters of lemonade did they have at the beginning?

$$\begin{array}{r} 58 \\ + \ 46 \\ \hline 104 \end{array}$$

They had 104 liters at the beginning.

Name _____   Date _____

Jesse practices the trumpet for a total of 165 minutes during the first week of school. He practices for 245 minutes during the second week.

a. Estimate the total amount of time Jesse practices by rounding to the nearest 10 minutes.

$$165 + 245 \approx 170 + 250 = 420$$

About 420 minutes

b. Estimate the total amount of time Jesse practices by rounding to the nearest 100 minutes.

$$165 + 245 \approx 200 + 200 = 400$$

About 400 minutes

c. Explain why the estimates are so close to each other.

In (a) and (b) the numbers were close to the halfway marks.

Name _____   Date _____

1. Solve the subtraction problems below.

   a. 381 mL − 146 mL

   $$\begin{array}{r} 3 8 \overset{7\ 11}{\cancel{8}\cancel{1}} \\ -\ 1 4 6 \\ \hline 2 3 5 \end{array}$$

   235 mL

   b. 730 m − 426 m

   $$\begin{array}{r} 7 \overset{2\ 10}{\cancel{3}\cancel{0}} \\ -\ 4 2 6 \\ \hline 3 0 4 \end{array}$$

   304 m

   c. 509 kg − 384 kg

   $$\begin{array}{r} 5 \overset{4\ 10}{\cancel{0}9} \\ -\ 3 8 4 \\ \hline 1 2 5 \end{array}$$

   125 kg

2. The total length of a banner is 408 centimeters. Carly paints it in 3 sections. The first 2 sections she paints are 187 centimeters long altogether. How long is the third section?

   $$\begin{array}{r} 4 \overset{3\ 10}{\cancel{0}8} \\ -\ 1 8 7 \\ \hline 2 2 1 \end{array}$$

   187   ?

   408
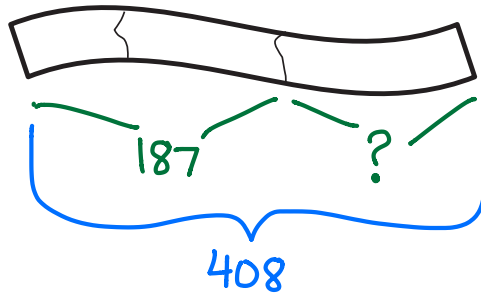
The third section is 221 cm long.

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Lesson 18:   Decompose once to subtract measurements including three-digit minuends with zeros in the tens or ones place.

229

Name _____   Date _____

1. Solve the subtraction problems below.

    a. 346 m – 187 m

    $$\begin{array}{r} {}^{2}\ {}^{3}\!\overset{13}{\cancel{3}}\ {}^{16} \\ 3\ 4\ 6 \\ -\ 1\ 8\ 7 \\ \hline 1\ 5\ 9 \end{array}$$

    159 m

    b. 700 kg – 592 kg

    $$\begin{array}{r} {}^{6}\ {}^{9}\ {}^{10} \\ 7\ 0\ 0 \\ -\ 5\ 9\ 2 \\ \hline 1\ 0\ 8 \end{array}$$

    108 kg

2. The farmer's sheep weighs 647 kilograms less than the farmer's cow. The cow weighs 725 kilograms. How much does the sheep weigh?
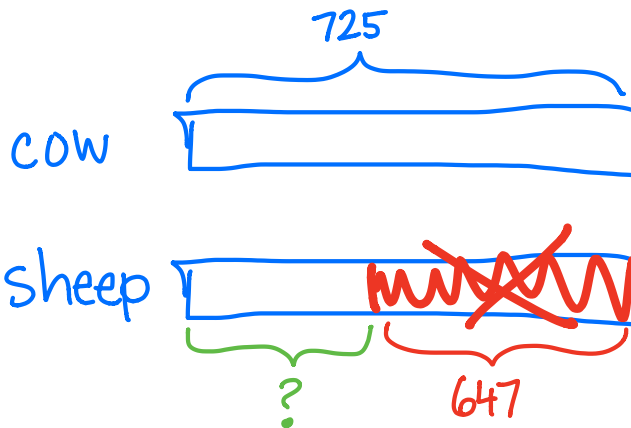
$$\begin{array}{r} {}^{6}\ {}^{11}\!\overset{\cancel{1}}{\cancel{2}}\ {}^{15} \\ 7\ 2\ 5 \\ -\ 6\ 4\ 7 \\ \hline 7\ 8 \end{array}$$

The sheep weighs 78 kg.

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Lesson 19:   Decompose twice to subtract measurements including three-digit minuends with zeros in the tens and ones places.

239

Name _____　　　Date _____

Kathy buys a total of 416 grams of frozen yogurt for herself and a friend. She buys 1 large cup and 1 small cup.
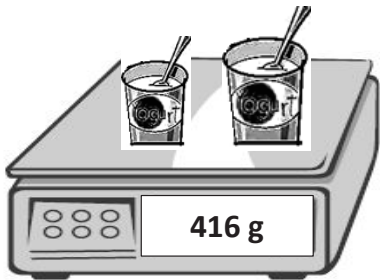
Large Cup	363 grams
Small Cup	? grams

416 g

a.　Estimate how many grams are in the small cup of yogurt by rounding.

$$416 - 363 \approx 420 - 360 = 60$$

The small cup is about 60g.

b.　Estimate how many grams are in the small cup of yogurt by rounding in a different way.

$$416 - 363 \approx 400 - 350 = 50$$

The small cup is about 50g.

c.　How many grams are actually in the small cup of yogurt?

The small cup is 53 g.

$$
\begin{array}{r}
4\overset{3}{\cancel{1}}\overset{11}{6} \\
-3\,6\,3 \\
\hline
5\,3
\end{array}
$$

d.　Is your answer reasonable? Which estimate was closer to the exact weight? Explain why.

My answer is reasonable because it is close to my estimates.

My second estimation was closer because both numbers were rounded down rather than one rounding up and the other rounding down.

EUREKA MATH　　**Lesson 20:**　Estimate differences by rounding and apply to solve measurement word problems.　　**253**

Name _____   Date _____

Rogelio drinks water at every meal. At breakfast, he drinks 237 milliliters. At lunch, he drinks 300 milliliters. At dinner, he drinks 177 milliliters.

    a.   Estimate the total amount of water Rogelio drinks. Then, find the actual amount of water he drinks at all three meals.

$$237 + 300 + 177 \approx 240 + 300 + 200 = 740$$

About 740 mL of water.

The actual amount is 714 mL.

$$\begin{array}{r} \overset{1}{}\overset{1}{}237 \\ 300 \\ +\ 177 \\ \hline 714 \end{array}$$

    b.   Estimate how much more water Rogelio drinks at lunch than at dinner. Then, find how much more water Rogelio actually drinks at lunch than at dinner.

$$300 - 177 \approx 300 - 200 = 100$$

About 100 mL more

$$\begin{array}{r} \overset{2}{}\overset{9}{\cancel{3}}\overset{10}{\cancel{0}}\cancel{0} \\ -\ 177 \\ \hline 123 \end{array}$$

He drinks 123 mL more water at lunch than dinner.