

## Homework Helpers

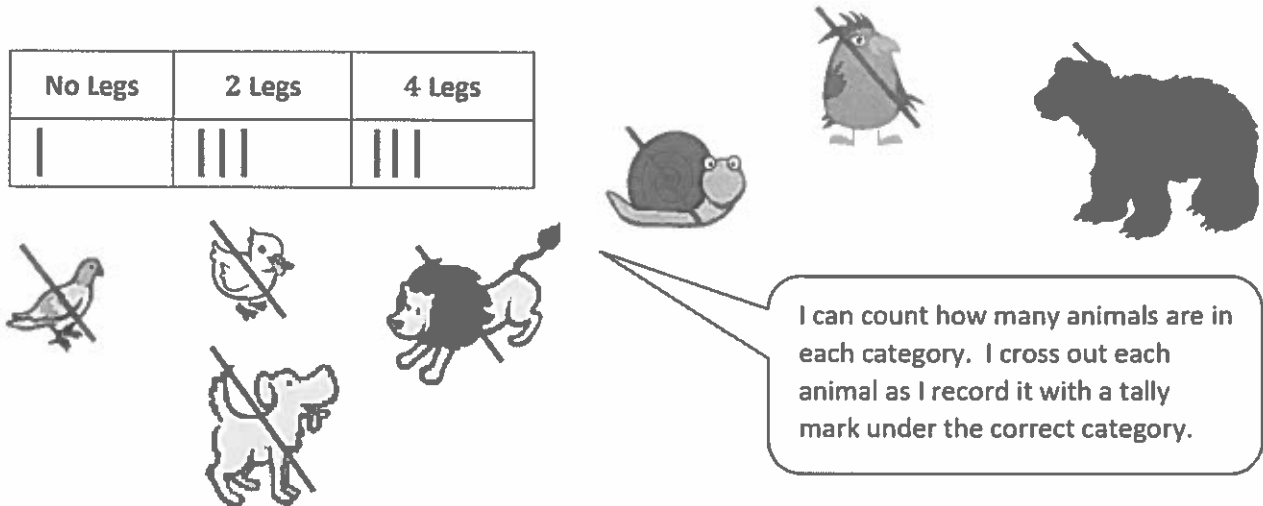
# Grade 2 Module 7



## G2-M7-Lesson 1

1. Count and categorize each picture to complete the table with tally marks.

No Legs	2 Legs	4 Legs



2. Use the Animal Classification table to answer the following questions about the types of animals Ms. Lee's second-grade class found in the local zoo.

Animal Classification			
Birds	Fish	Mammals	Reptiles
6	5	11	3

I know that this question is asking me to find the total number of birds, fish, or reptiles in the table. It's not asking for the number of categories.

- a. How many animals are birds, fish, or reptiles? 14     $6 + 5 + 3 = 14$
- b. How many more birds and mammals are there than fish and reptiles? 9     $17 - 8 = 9$
- c. How many animals were classified? 25     $6 + 5 + 11 + 3 = 11 + 14 = 25$

- d. If 5 more birds and 2 more reptiles were added to the table, how many fewer reptiles would there be than birds? 6

**B**  $6 + 5 = 11$        $5 + \underline{6} = 11$

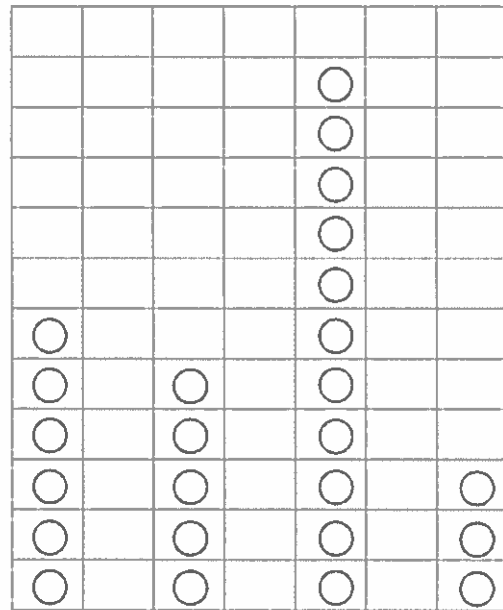
**R**  $3 + 2 = 5$

I can use addition or subtraction when I see the words *how many fewer*.

## G2-M7-Lesson 2

1. Use grid paper to create a picture graph below using data provided in the table. Then, answer the questions.

Central Park Zoo Animal Classification			
Birds	Fish	Mammals	Reptiles
6	5	11	3

Title: Central Park Zoo Animal Classification

- a. How many more animals are mammals and fish than birds and reptiles? 7

$$11 + 5 = 16 \quad 6 + 3 = 9 \quad 16 - 9 = 7$$

- b. How many fewer animals are reptiles than mammals? 8

$$11 - 3 = 8$$

I use the graph to help me answer comparison questions like *how many more* or *how many fewer*.

I organize the data from the table in a vertical picture graph. I put the categories in the same order as they are in the table, so I don't get confused. I must remember to include a title and a legend.

Birds    Fish    Mammals    Reptiles

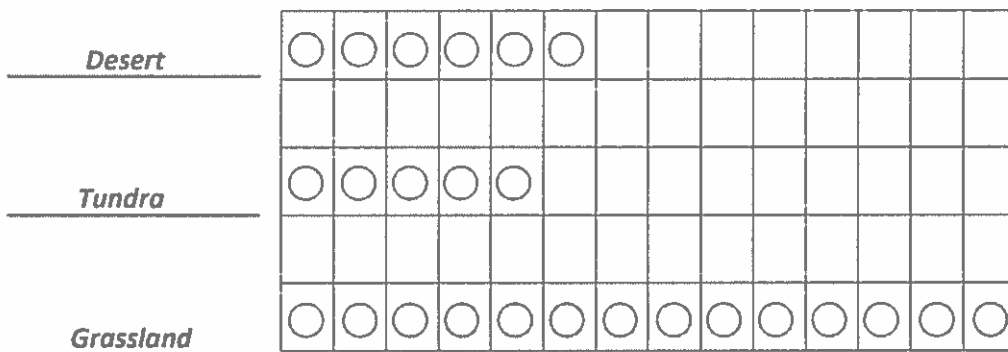
Legend: Each ○ stands for 1 animal

2. Use the table below to create a picture graph in the space provided.

Animal Habitats		
Desert	Tundra	Grassland

I draw a circle in each box to represent each animal recorded by a tally mark in the table. Circles help me to draw efficiently, and the legend explains what they represent.

Title: Animal Habitats



Legend: Each ○ stands for 1 animal

a. How many more animals live in the grassland than in the desert? 8

$$14 - 6 = 8$$

b. How many fewer animals live in the tundra than in the grassland and desert combined? 15

$$14 + 6 = 20 \quad 20 - 5 = 15$$

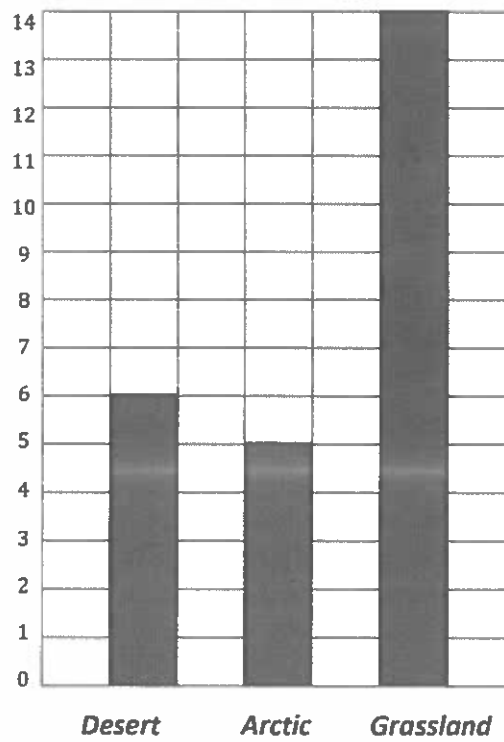
The first question asks *how many more*. I can figure out the answer by subtracting or by counting the extra circles in the picture graph for the grassland compared to the desert. There are 8 extra circles.

## G2-M7-Lesson 3

Complete the bar graph below using data provided in the table.

Animal Habitats		
Desert	Arctic	Grassland

Title: Animal Habitats



I know that each box equals one animal, so I color in 6 boxes for the *desert* category.

The scale along the side reminds me of a ruler! It's like a vertical number line. I could also make this a horizontal bar graph with the categories along the side and the scale along the bottom.

- a. How many total animals are living in the three habitats? 25

$$6 + 5 + 14 = 11 + 14 = 25$$

- b. How many more animals live in the grassland than in the desert and arctic combined? 3

$$6 + 5 = 11$$

$$14 - 11 = 3$$

When I combine the number of boxes I colored for *desert* and *arctic*, I count 11. I look at the graph and see that 11 is 3 fewer boxes than 14, which is the number of animals living in the grassland.

- c. If 2 animals were removed from each category, how many animals would there be? 19

$$4 + 3 + 12 = 19$$



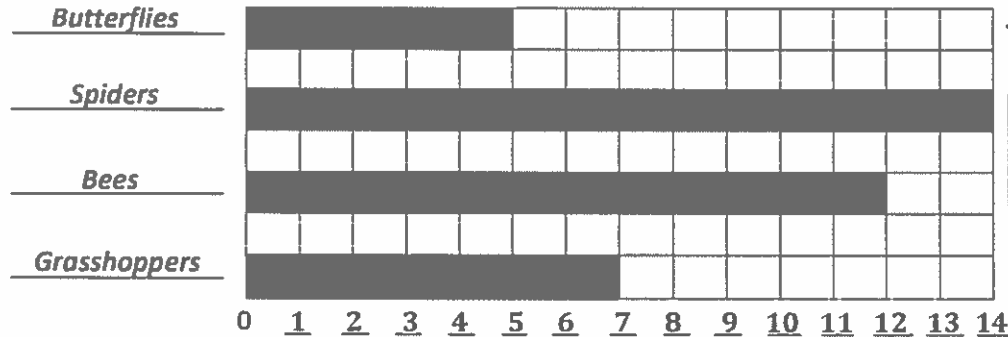
## G2-M7-Lesson 4

Complete the bar graph using the table with the types of bugs Alicia counted in the park. Then, answer the following questions.

Types of Bugs			
Butterflies	Spiders	Bees	Grasshoppers
5	14	12	7

Before I can record the data, I need to write a title for the graph, label the four categories, and write a number scale at the bottom.

Title: Types of Bugs



I colored 5 boxes for butterflies because each box represents 1 unit.

- a. How many more bees than grasshoppers were counted in the park? 5

$$7 + \underline{\quad} = 12$$

- b. How many bugs did Alicia count in the park? 38

$$\begin{array}{r} 5 + 14 + 12 + 7 = \underline{\quad} \\ \swarrow \quad \searrow \quad \swarrow \quad \searrow \\ 19 \quad + \quad 19 \\ \underline{20 + 20 - 2 = 38} \end{array}$$

I know I can add in any order and use the strategy that works best for me. When I add  $19 + 19$ , I think of adding  $20 + 20$ . But then I have to subtract 2 because each addend is 1 less than 20.

- c. How many fewer butterflies than bees and grasshoppers were counted in the park? 14

$$12 + 7 = 19$$

$$19 - 5 = 14$$

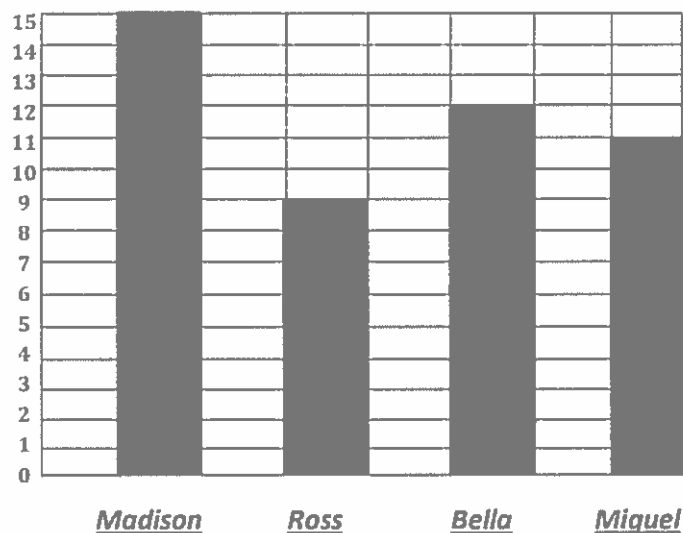
I can answer comparison questions using the data from my graph. Here, I subtracted  $19 - 5 = 14$ . In part (a), I thought of the missing part to solve,  $7 + \underline{\quad} = 12$ . I can use both operations!

## G2-M7-Lesson 5

Use the table to complete the bar graph. Then, answer the following questions.

Number of Dimes Donated			
Madison	Ross	Bella	Miguel
15	9	12	11

Title: Number of Dimes Donated



I know that the beginning of the count scale starts at 0, not 1.

- a. How many fewer dimes did Bella donate than Ross and Miguel? 8

$$9 + 11 = 20 \quad 12 + \underline{\quad} = 20$$

- b. How many more dimes are needed for Madison to donate the same as Ross and Bella? 6

$$9 + 12 = 21 \quad 15 + \underline{\quad} = 21$$

- c. How many dimes were donated in total? 47

$$15 + 9 + 12 + 11 = \underline{\quad}$$

$$27 + 20 = 47$$

I can use mental math to find the total. I can make a ten:  $9 + 11 = 20$ . It's easy to add the tens and ones when I combine 15 and 12. Then,  $27 + 20 = 47$ .

- d. Circle the pair that has more dimes, Madison and Ross or Bella and Miguel. How many more?

1

$$15 + 9 = 24$$

$$12 + 11 = 23$$

$$24 - 23 = 1$$

## G2-M7-Lesson 6

Count or add to find the total value of each group of coins.

Write the value using the ¢ or \$ symbol.

1.		<u>7¢</u>
2.		<u>13¢</u>
3.		<u>20¢</u>
4.		<u>18¢</u>
5.		<u>31¢</u>

I know 5 and 2 makes 7, so 5 cents and 2 cents make 7 cents.

I see a dime, which is worth 10¢, and then I also see 2 nickels, or 2 5's, which make another 10¢. The total is 20 cents!

I can also count on to solve: 10, 15, 16, 17, 18. I can't forget the cents symbol!

When I am counting coins, I start with the largest value first. It makes it easier to add them up and find the total! The quarter and nickel make 30, plus the penny is 31. That's much easier than adding  $25 + 6$ . The total is 31 cents!

6. 

90¢

7. 

\$1

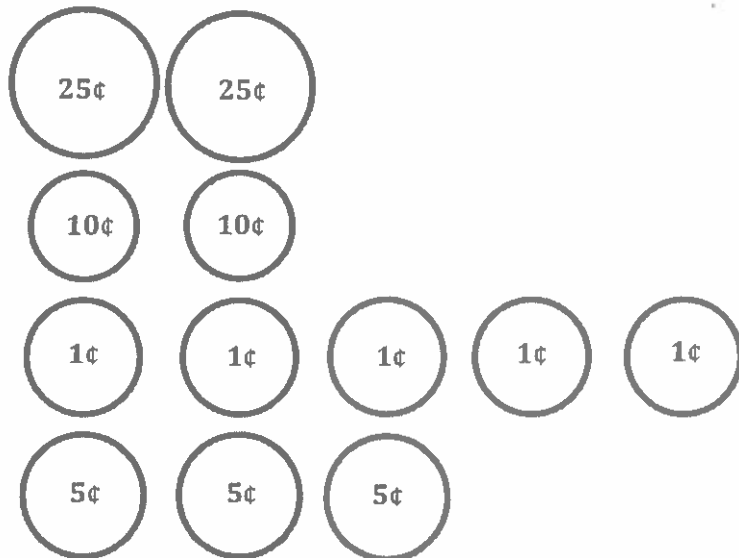
I know that 2 quarters make 50 cents, so I start there. The dimes have the next biggest value, so I add those on. There are 3 dimes, so I add on 30 cents. Then there are 2 nickels, so I add on 10 more cents. The total is 90 cents!

I can make the next ten by adding the nickel to the quarter. That makes it easier to add on all the dimes.  $25 + 5 = 30$ , and then I skip-count 40, 50, ..., 100. 100 cents is one dollar!

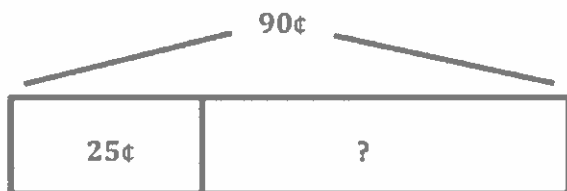
## G2-M7-Lesson 7

Solve.

Enrique had 2 quarters, 2 dimes, 5 pennies, and 3 nickels in his wallet. Then, he bought a lemonade for 25 cents. How much money did he have left?



$$70\text{¢} + 20\text{¢} = 90\text{¢}$$



$$90 \xrightarrow{-20} 70 \xrightarrow{-5} 65$$

$$90\text{¢} - 25\text{¢} = ?$$

$$90\text{¢} - 25\text{¢} = 65\text{¢}$$

*Enrique had 65 cents left.*

$$\begin{array}{r} 50\text{ cents} \\ 20\text{ cents} \\ \hline 70\text{ cents} \end{array}$$

$$\begin{array}{r} 5\text{ cents} \\ 15\text{ cents} \\ \hline 20\text{ cents} \end{array}$$

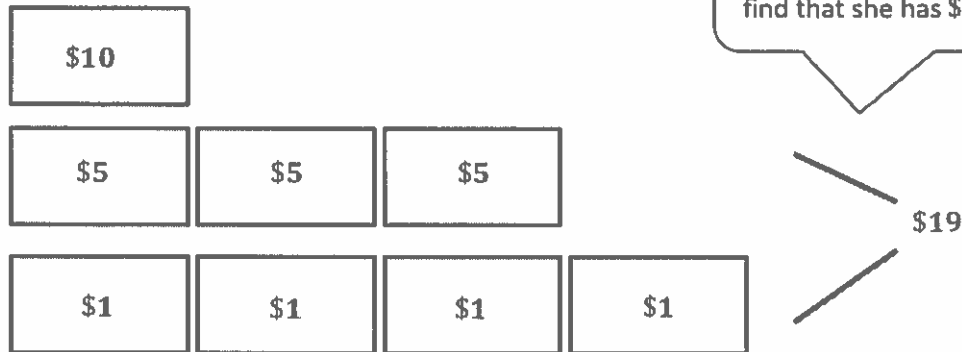
First, I draw the coins in Enrique's wallet. Then I add them up and find that he has 90 cents.

I draw a tape diagram to show the parts and the whole. The whole is 90 cents. One part is 25 cents for the lemonade. The part Enrique has left is my unknown. I can solve using the arrow way.

## G2-M7-Lesson 8

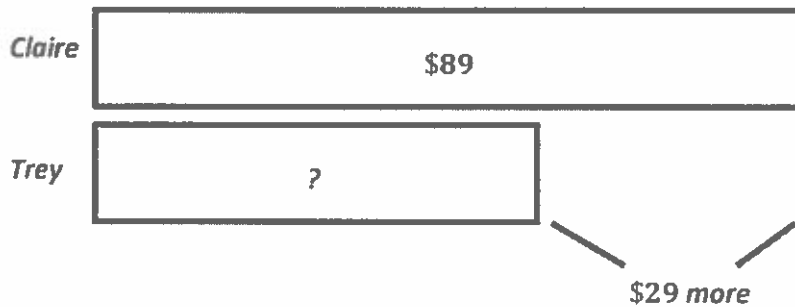
Solve.

Claire has \$89. She has 3 more five-dollar bills, 4 more one-dollar bills, and 1 more ten-dollar bill than Trey. How much money does Trey have?



First I can draw all the bills that Claire has more than Trey. I add them up and find that she has \$29 more than Trey.

$$\$10 + \$19 = \$29$$



Next, I draw a tape diagram to compare Claire's and Trey's money.



$$\$89 - \$29 = ?$$

Claire has \$89, and I know Trey has \$29 less than that. I don't know how much Trey has yet, so I put a question mark in the tape that represents Trey's money.

*Trey has \$60.*

## G2-M7-Lesson 9

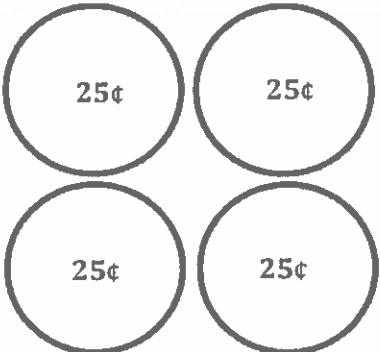
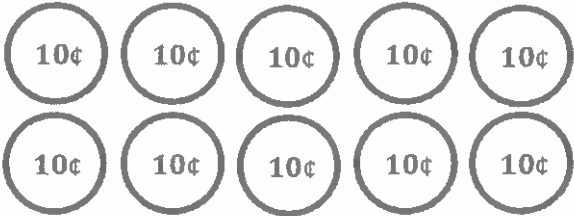
1. Write another way to make the same total value.

<p>21 cents</p>  <p>2 dimes and 1 penny = 21 cents</p>	<p>Another way to make 21 cents</p> 
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I know that 3 quarters is 75 cents. Then I add up the other coins.  $10 + 5 + 5 + 5 = 25$ , so Andrew has 100 cents, or 1 dollar.

I know that 2 nickels makes 10 cents, so I just change 1 dime for 2 nickels. I could have also used some pennies instead of only nickels, but that would take longer to draw because it uses more coins.

2. Andrew has 3 quarters, 1 dime, 2 nickels, and 5 pennies in his pocket. Write two other coin combinations that would equal the same amount of change.

	
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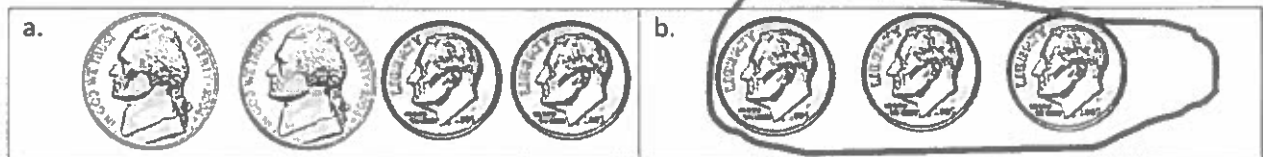
I know that 4 quarters is 1 dollar.

Since I can count by 10's to get to 100, I can draw 10 dimes. 10 dimes = 100 cents, or \$1.



## G2-M7-Lesson 10

1. Ana showed 30 cents two ways. Circle the way that uses the fewest coins.

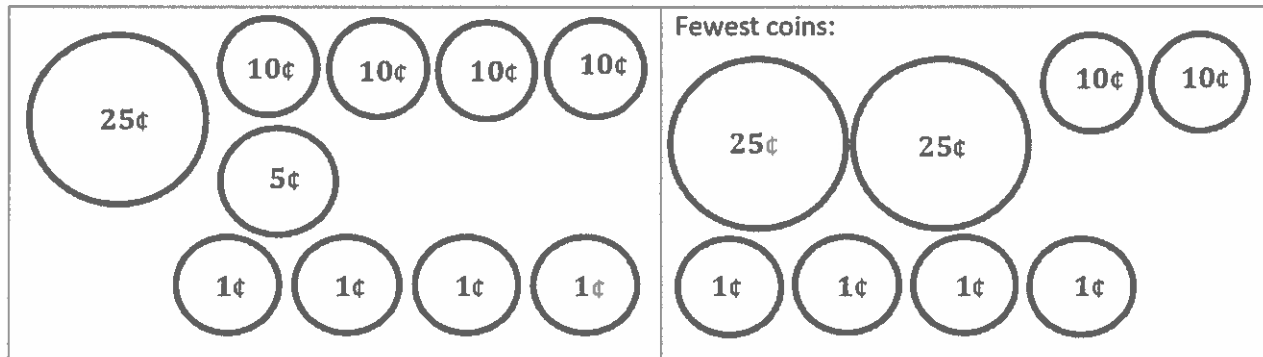


What two coins from part (a) were changed for one coin in part (b)?

*Ana changed 2 nickels for 1 dime.*

Ana had 2 nickels, which equal 10 cents, so she was able to change them for 1 dime.

2. Show 74 cents two ways. Use the fewest possible coins on the right below.



For the fewest coins, I start with the quarter because it has the highest value. 25, 50, 75. Oops, 3 quarters is too much! I'll stop at 50 cents. Now, I add on the next highest value, dimes. 60, 70. I need 4 cents more, so I add 4 pennies.

3. Shelby made a mistake when asked for two ways to show 66¢. Circle her mistake, and explain what she did wrong.

2 quarters, 1 dime, 1 nickel, 1 penny	Fewest coins: 6 dimes, 1 nickel, 1 penny
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*The first combination is the fewest coins. Since 2 quarters have the same value as 5 dimes, Shelby*

*only needs 5 coins to make 66¢. Her second combination uses 8 coins.*

## G2-M7-Lesson 11

1. Count up using the arrow way to complete each number sentence. Then, use coins to check your answers, if possible.

$$65¢ + \underline{35¢} = 100¢$$

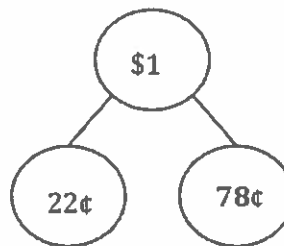
$$65 \xrightarrow{+5} 70 \xrightarrow{+30} 100$$

I start at 65 cents and add 5 more to get to the next 10, which is 70 cents. I know I need 30 more cents to get to 100 cents, or \$1.  $5 + 30 = 35$ , so the missing part is 35 cents.

2. Solve using the arrow way and a number bond.

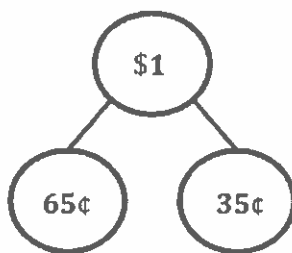
$$22¢ + \underline{78¢} = 100¢$$

$$22 \xrightarrow{+8} 30 \xrightarrow{+70} 100$$



I use the number bond to show that the whole is \$1, and there are two parts. The part I know already is 22 cents. After I solve using the arrow way, I can fill in the missing part, which is 78 cents.

$$100¢ - 65¢ = \underline{35¢}$$

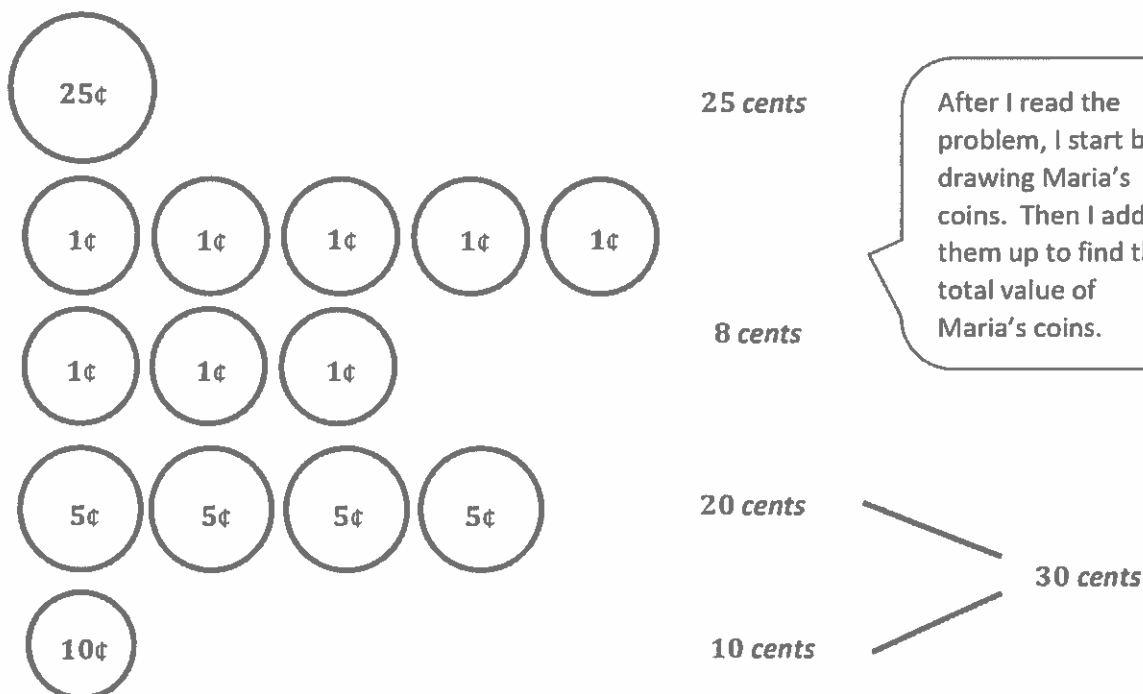


$$100 \xrightarrow{-60} 40 \xrightarrow{-5} 35$$

I use the arrow way to subtract, too! If I buy something for 65 cents, and I give the cashier 1 dollar, I will get 35 cents in change!

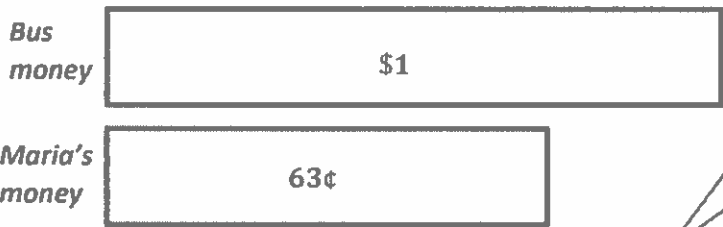
### G2-M7-Lesson 12

Maria has 1 quarter, 8 pennies, 4 nickels, and 1 dime. She needs \$1 to ride the bus. How much should Maria borrow from her mom?



After I read the problem, I start by drawing Maria's coins. Then I add them up to find the total value of Maria's coins.

$$25 \xrightarrow{+30} 55 \xrightarrow{+5} 60 \xrightarrow{+3} 63$$



Now I know Maria has 63 cents, so I am ready to draw a tape diagram and solve. I want to know how much more she needs to ride the bus, so that's my unknown.

$$63 \xrightarrow{+7} 70 \xrightarrow{+30} 100$$

$$63 + 37 = 100$$

Maria should borrow 37 cents.

Now I use the arrow way to count up to the friendly number 70 and then to 100.

## G2-M7-Lesson 13

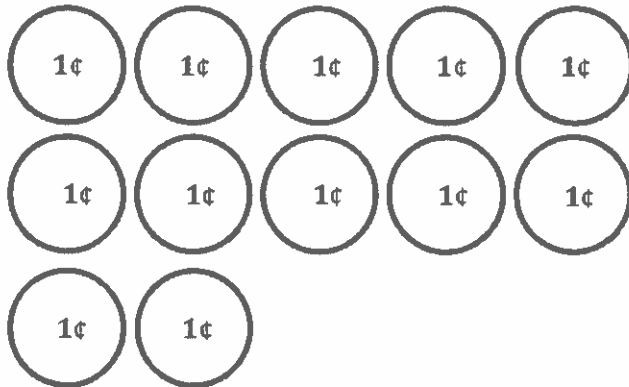
James had 1 quarter, 1 dime, and 12 pennies. He found 3 coins under his bed. Now he has 77 cents. What 3 coins did he find?



25 cents



10 cents

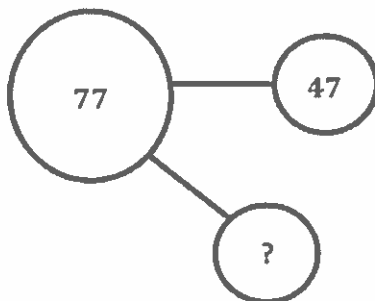


12 cents

After I read the problem, I draw the coins that James had at first. Then I add them up to find the total using the arrow way. James had 47 cents.

$$25 \xrightarrow{+10} 35 \xrightarrow{+10} 45 \xrightarrow{+2} 47$$

$$47 + \underline{30} = 77$$



James found 3 dimes.

When I show it this way, in a number bond with a missing part, it helps me understand the situation. He found 30 cents more because  $47 + 30 = 77$ . I know because only the tens change from 47 to 77. 77 is 3 tens more than 47.

I know that James found 30 cents, and 30 is 3 tens, so he must have found 3 dimes!

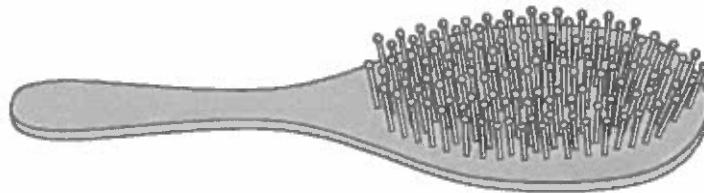
## G2-M7-Lesson 14

1. Measure these objects found in your home with an inch tile. Record the measurements in the table provided.

Object	Measurement
Length of a hairbrush	4 inches
Height of a milk carton	10 inches
Length of the oven	27 inches

I put the tile at one end of the milk carton and make a mark where the tile begins and ends. Then, I move the tile forward and place the edge right on top of the previous hash mark.

Since I can't draw on an oven, I used the tip of my pencil to remind me where to place my inch tile each time. The spaces between my hash marks are the same length each time.

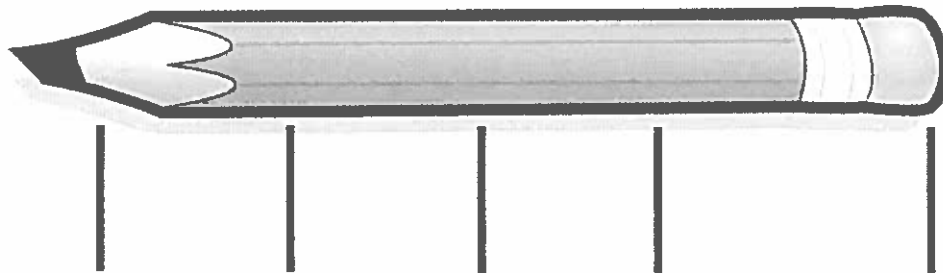


I leave no spaces between my inch tile and the hash marks I draw!

I use the mark and move forward strategy when I am measuring my little hairbrush with my red inch tile. I put my inch tile down touching the endpoint of the hairbrush. Then I make a mark where the inch tile ends so I know where to place it when I move it over.

I count the spaces between my hash marks to see how many inches long my hairbrush is. My hairbrush is almost 4 inches, so I can say it's about 4 inches.

2. Charlene measures her pencil with her inch tile. She marks off where each inch ends so she knows where to place the tile. Charlene says the pencil is 4 inches long.



Is Charlene's measurement correct? Explain your answer.

*It looks like Charlene did not start her measurement in the correct place. The first hash mark is not lined up with the endpoint of the pencil. It also looks like she was not careful with her measuring because the last hash mark looks farther than an inch from the one before. She is not correct.*

3. Use your inch tile to measure the pencil. How many inch tiles long is the pencil? Explain how you know.

*I was very careful to start at the tip of the pencil. I made a hash mark at the endpoint of the pencil. I used the mark and move forward strategy and was careful not to leave any space between my tile and my hash marks. The pencil is about 5 inches long.*

## G2-M7-Lesson 15

1. Measure the length of the object with your ruler, and then use your ruler to draw a line equal to the length of the object in the space provided.

a. A toothbrush is 6 inches.

When I measure my toothbrush, I line up the end of the toothbrush with the 0 on my ruler. The end of the handle is even with the 6 on my ruler.

b. Draw a line that is the same length as the toothbrush.



When I draw my line, I start at 0 and stop after 6 length units. My line is 6 inches long!

2. Measure another household object.

a. A bar of soap is 4 inches.

b. Draw a line that is the same length as the bar of soap.



3.

a. Which object was longer? toothbrush

b. Which object was shorter? bar of soap

I can tell the toothbrush is longer just by looking at the objects or the lines I drew. But to know how much longer it is, I can subtract!  $6 - 4 = 2$ , so the soap is 2 inches shorter.

c. The difference between the longer object and the shorter object is 2 inches.



4. Measure and label the length of each side of the shape in inches using your ruler.



a. The longest side of the rectangle is 4 inches.

b. The shortest side of the rectangle is 1 inch.

To find the difference, I just subtract!  $4 - 1 = 3$

c. The longest side of the rectangle is 3 inches longer than the shortest side of the rectangle.

Measuring objects with my ruler is so much quicker than using an inch tile!  
It's like all the tiles are connected!

## G2-M7-Lesson 16

1. Circle the unit that would best measure each object.

Length of a window	inch / <u>foot</u> / yard
Height of an office building	inch / foot / <u>yard</u>
Length of a shoe	<u>inch</u> / foot / yard

I have to think about how long each object is. If it is very, very long, then I know I should use yards to measure because it is more efficient. It would take a very long time to measure an office building in inches, and that means you could make a lot more mistakes!

I can picture a yardstick in my mind. I know that an airplane is way longer! I think the guitar is about the length of a yardstick because I can hold it in my arms the same way I can hold a yardstick.

2. Circle the correct estimate for each object.

- a. The length of an airplane is more than / less than / about the same as the length of a yardstick.
- b. The length of a guitar is more than / less than / about the same as the length of a yardstick.
- c. The height of a coffee mug is more than / less than / about the same as the length of a 12-inch ruler.

3. Name 3 objects that you find outside. Decide which unit you would use to measure that object. Record it in the chart in a full statement.

Object	Unit
<i>oak tree</i>	I would use <u>yards</u> to measure the height of an <u>oak tree</u> .
<i>flower</i>	<i>I would use inches to measure the height of a flower.</i>
<i>park bench</i>	<i>I would use feet to measure the height of a park bench.</i>

I tried to choose objects that I measure in different units. The tree is big so that works for yards. The park bench could also be measured in yards, but if I measure it in feet, I can give a more accurate measurement.

## G2-M7-Lesson 17

Estimate the length of each item by using a mental benchmark. Then, measure the item using feet, inches, or yards.

Item	Mental Benchmark	Estimation	Actual Length
Length of a car	<i>Yardstick or width of a door</i>	<i>6 yards</i>	<i>5 yards</i>
Length of the kitchen sink	<i>Piece of paper</i>	<i>2 feet</i>	<i>almost 3 feet</i>
Length of a pen cap	<i>Quarter</i>	<i>1 inch</i>	<i>about an inch</i>

I choose to use the yardstick as my mental benchmark to estimate the length of the car because the car is very long.

I use the paper to estimate the length of the sink because a piece of paper is my mental benchmark for a foot.

I am so close on my estimate of the length of the pen cap! It is easy to picture it next to the quarter, so I estimate 1 inch. The pen cap is just a little longer than 1 inch, so it's about 1 inch.

## G2-M7-Lesson 18

1. Measure the lines in inches and centimeters. Round the measurements to the nearest inch or centimeter.



Centimeters are smaller, so it takes more of them to cover the length of the line.

2.  
a. Draw a line that is 3 centimeters in length.



- b. Draw a line that is 3 inches in length.



An inch is longer than a centimeter, so of course my line that is 3 inches is longer than my line that is 3 centimeters!

3. Sam drew a line that is 11 centimeters long. Susan drew a line that is 8 inches long. Susan thinks her line is shorter than Sam's because 8 is less than 11. Explain why Susan's reasoning is incorrect.

*Susan's reasoning is incorrect because inches are longer than centimeters. You have to look*

*at the unit to figure out which line will be longer. An inch is a larger length unit, so Susan's*

*line is longer even though 8 is a smaller number.*

## G2-M7-Lesson 19

1. Measure each set of lines in inches, and write the length on the line. Complete the comparison sentence.

Line A

2 inches

Line B

6 inches

Line A measured about 2 inches. Line B measured about 6 inches.

Line B is about 4 inches longer than Line A.

To compare the difference in length, I can subtract  $6 - 2 = 4$ , or I can say  $2 + 4 = 6$ . Either way, I know that the difference is 4 inches!

2. Solve. Check your answers with a related addition or subtraction sentence.

a.  $9 \text{ inches} - 7 \text{ inches} = \underline{2} \text{ inches}$

$\underline{2} \text{ inches} + 7 \text{ inches} = 9 \text{ inches}$

I think of a number bond. Since I know the total and one part, I can figure out the other part. I can think of addition or subtraction to solve!

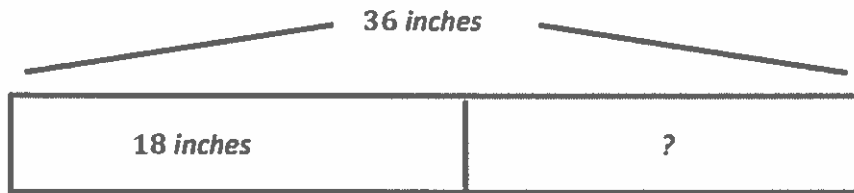
b.  $9 \text{ centimeters} + \underline{7} \text{ centimeters} = 16 \text{ centimeters}$

$16 \text{ centimeters} - 7 \text{ centimeters} = 9 \text{ centimeters}$

## G2-M7-Lesson 20

Solve using tape diagrams. Use a symbol for the unknown.

1. Angela knitted 18 inches of a scarf. She wants her scarf to be 1 yard long. How many more inches does Angela need to knit?



$$36 - 18 = 18$$

$$18 \xrightarrow{+2} 20 \xrightarrow{+10} 30 \xrightarrow{+6} 36$$

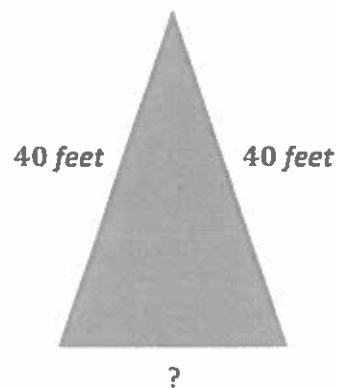
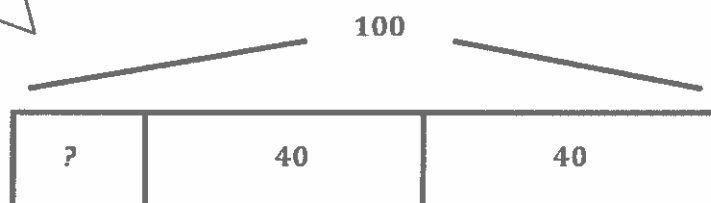
I know that a yard is 36 inches long. The scarf is one yard, so that is my whole. The part I know is the 18 inches that she already knitted.

I use the arrow way to find the missing part. I add  $2 + 10 + 6 = 18$ .

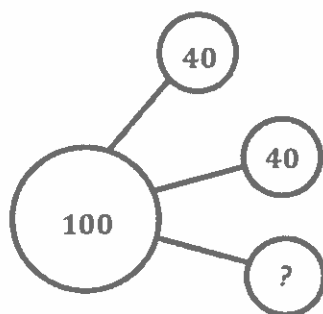
*Angela needs to knit 18 more inches to finish her scarf.*

2. The total length of all three sides of a triangle is 100 feet. Two sides of the triangle are the same length. One of the equal sides measures 40 feet. What is the length of the side that is not equal?

I use a three-part tape diagram because there are 3 parts in the whole.



Note: Triangle not drawn to scale.



The problem tells me that all the sides together equal 100 feet, so I know that  $40 + 40 + ? = 100$ . That is what I show in my tape diagram and my number bond.

$$40 + 40 + ? = 100$$

*The length of the third side is 20 feet.*

$40 + 40 = 80$ . I think, 80 plus what number equals 100? 20. The missing part is 20.



## G2-M7-Lesson 21

Find the value of the point on each part of the meter strip marked by a letter. For each number line, one unit is the distance from one hash mark to the next. (Note: Number lines not drawn to scale.)



Each unit has a length of 25 centimeters.

K = 100 cm

To find the value of each unit, I first have to find the difference between the endpoints:  $175 - 25 = 150$ . The distance is 150. Since there are 6 equal units, I try counting by 10, but that is too small. Let me try counting by 25. I touch each hash mark as I go: 25, 50, 75, 100, 125, 150, 175. It works! K is right in the middle at 100 cm.

2. Each hash mark represents 15 more on the number line.



What is the difference between X and Y? 45

X = 615

Y = 660

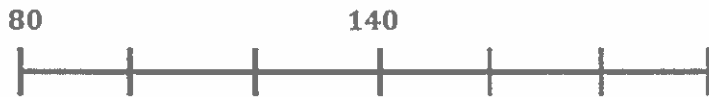
I can find the difference between X and Y by counting by 15. 15, 30, 45. I can also see that there are 3 units between X and Y, and  $15 + 15 + 15 = 45$ .

I start at 600 and count by 15 to find the value at each hash mark.

## G2-M7-Lesson 22

1. Each unit length on both number lines is 20 feet. (Note: The number lines are not drawn to scale.)

- a. Show 60 feet more than 80 feet on the number line.



I can show 60 more feet on the number line by labeling the endpoint on the left 80 and then counting on 20, 40, 60. It is the same as adding  $80 + 60$ .

- b. Write an addition sentence to match the number line.

$$80 + 60 = 140$$

- c. Show 80 feet less than 125 feet on the number line.

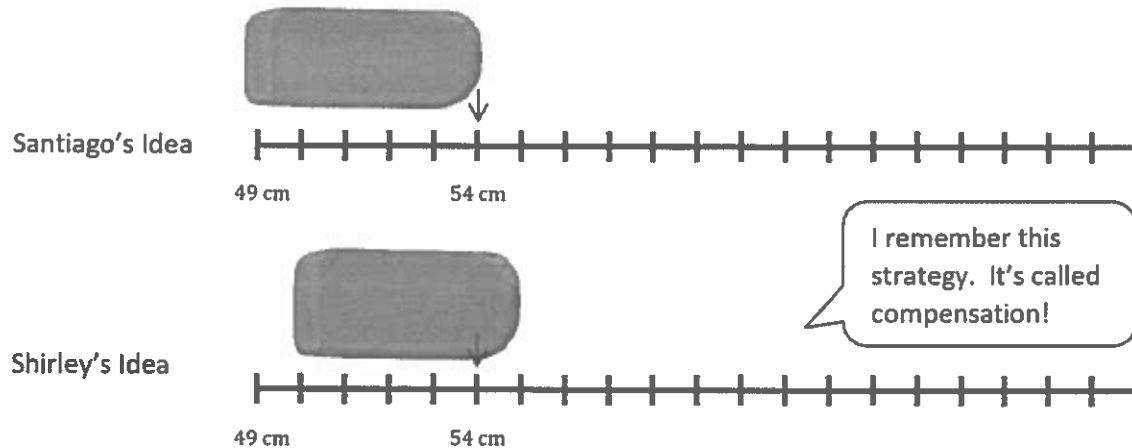


I start by labeling the endpoint on the right. Then I count down by 20's 4 times since it's 80 feet less. Each time, I touch a hash mark on the number line.

- d. Write a subtraction sentence to match the number line.

$$125 - 80 = 45$$

2. Santiago's meter strip got cut off at 49 centimeters. To measure the length of his eraser, he writes "49 cm – 49 cm." Shirley says it's easier to move the eraser over 1 centimeter. What will Shirley's subtraction sentence be? Explain why she is correct.



*Shirley's subtraction sentence is  $55 - 50 = 5$ . She knows she can move the eraser on the number line, and the length will stay the same. By moving it one unit to the right, she makes an easier problem to solve.  $54 - 49$  also equals 5, but it's easier to subtract a friendly number like 50 because she only has to subtract the tens.*

## G2-M7-Lesson 23

1. Measure the length of your shoe and record the length here: about 7 inches

Then, measure the length of your family members' shoes, and write the lengths below.

Name:	Shoe Length:
<u>Mom</u>	<u>10 inches</u>
<u>Dad</u>	<u>11 inches</u>
<u>Isaiah (brother)</u>	<u>about 9 inches</u>
<u>Karen (sister)</u>	<u>about 7 inches</u>
_____	_____

I was very careful to measure everyone's shoe starting at 0 on my ruler.

My sister's shoe is a little shorter than 7 inches, and my shoe is a little longer than 7 inches, so both our shoes are about 7 inches.

2. Record your data using tally marks on the table provided.

Shoe Length	Tally of Number of People
Shorter than 9 inches	
About 9 inches	
Longer than 9 inches	

- a. How many more people have a shoe shorter than 9 inches than have a shoe about equal to 9 inches?

1 person

- b. What is the least common shoe length?

about 9 inches

- c. Ask and answer one comparison question that can be answered using the data above.

Question: How many fewer people have a shoe that is about 9 inches than is longer than 9 inches?

Answer: 1 person

### G2-M7-Lesson 24

Use the data in the table to create a line plot and answer the questions.

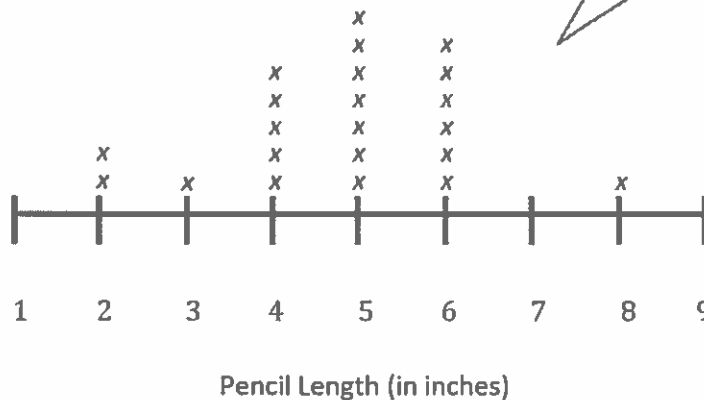
Pencil Length (in inches)	Number of Pencils
2	2
3	1
4	3
5	4
6	3
7	0
8	1

First, I look at the data and count how many pencils there are for each length.

Next, I make a number line. I include all the numbers between the shortest and longest lengths, even though no pencils measured 7 inches. All of my intervals must be equal.

Then I put one X for each pencil. There is 1 pencil with a length of 3 inches, so I put only 1 X above the 3.

Length of Pencils in Mr. Murray's Class



Describe the pattern you see in the line plot.

*The most common pencil length is 5 inches, but 4 inches and 6 inches are also common.*

*Most of the X's are in the middle of the line plot.*

Create your own comparison question related to the data.

*How many fewer pencils have a length of 4 inches than a length of 5 inches?*

### G2-M7-Lesson 25

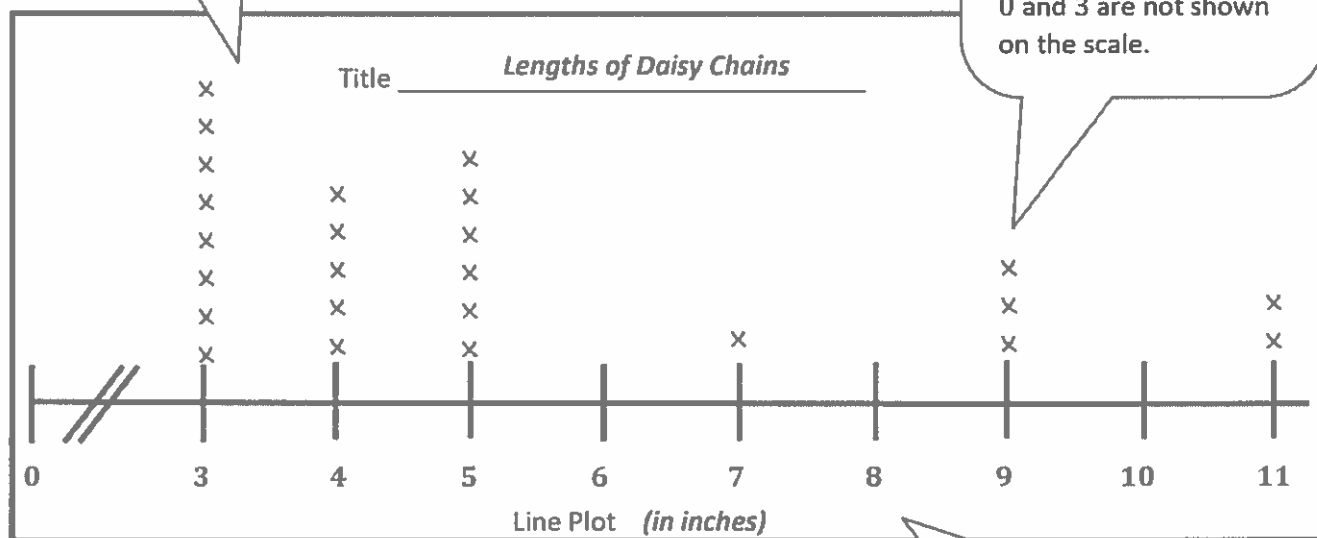
Use the data in the table provided to create line plots and answer questions.

The table shows the lengths of the daisy chains made at a birthday party.

Length of Daisy Chains	Number of Daisy Chains
3 inches	8
4 inches	5
5 inches	6
7 inches	1
9 inches	3
11 inches	2

I draw X's above each length to show the data from the table. So I put 8 X's above 3 inches since there are 8 daisy chains that are 3 inches.

I draw a number line that starts at 3 inches and ends at 11 inches. Since my starting point is 3, I draw a double hash mark to show that the numbers between 0 and 3 are not shown on the scale.



a. How many daisy chains were made? 25

b. Draw a conclusion about the data in the line plot.

I give my line plot a title, and I label the unit of measure, inches.

*It is easier to make a short daisy chain. Most of the daisy chains are 5 inches or less.*

- c. If 5 more people made 7-inch daisy chains and 6 more people made 9-inch daisy chains, how would it change how the line plot looks?

*If 5 more people made 7- inch daisy chains and 6 more people made 9- inch daisy chains, then a*

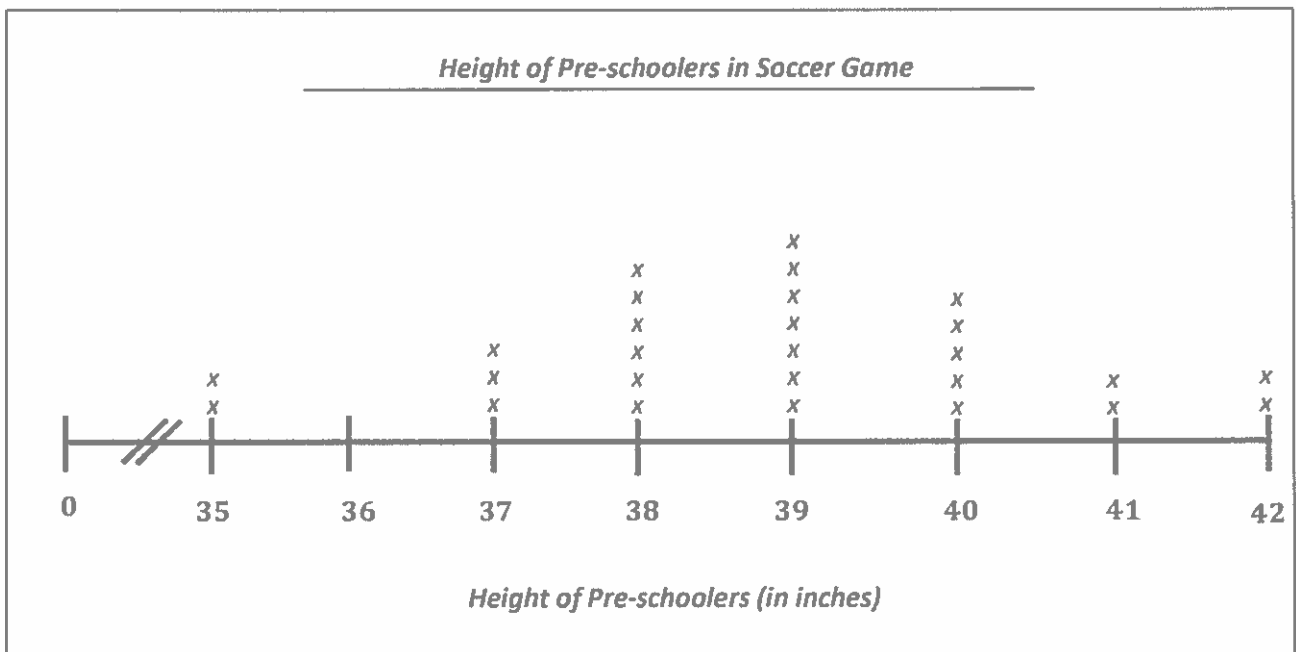
*9-inch chain would be most common, and an 11- inch chain would be least common.*

## G2-M7-Lesson 26

Use the data in the table provided to create a line plot and answer the questions. Plot only the heights of participants given.

The table below describes the heights of pre-schoolers in the soccer game.

Height of Pre-schoolers (in inches)	Number of Pre-schoolers
35	2
37	3
38	6
39	7
40	5
41	2
42	2





1. How many pre-schoolers were measured? 27

I started adding with the bigger numbers. I know that  $6 + 7 = 13$ . Then  $13 + 5 = 18$ , and 2 more is 20. All that is left is  $3 + 2 + 2 = 7$ . And  $20 + 7 = 27$ .

2. How many more pre-schoolers are 38 or 39 inches than 37 or 40 inches? 5

I know that 13 pre-schoolers are 38 inches or 39 inches, and 8 pre-schoolers are 37 or 40 inches, so then I just subtract.  $13 - 8 = 5$ , so the answer is 5 pre-schoolers.

3. Draw a conclusion as to why zero pre-schoolers were between 0 and 35 inches.

There were 0 pre-schoolers less than 35 inches, because most pre-schoolers are more than 35 inches.

It would be hard to play on a soccer team if you were only 25 inches tall. That's like a baby!

4. For this data, a line plot / table (circle one) is easier to read because ...

It is easy to see which heights had the most and least number of pre-schoolers by looking at the number of X's. Also, the measurements are close together, so it's easy to make the number line.