Eureka Math

3rd Grade
Module 6
Lesson 3

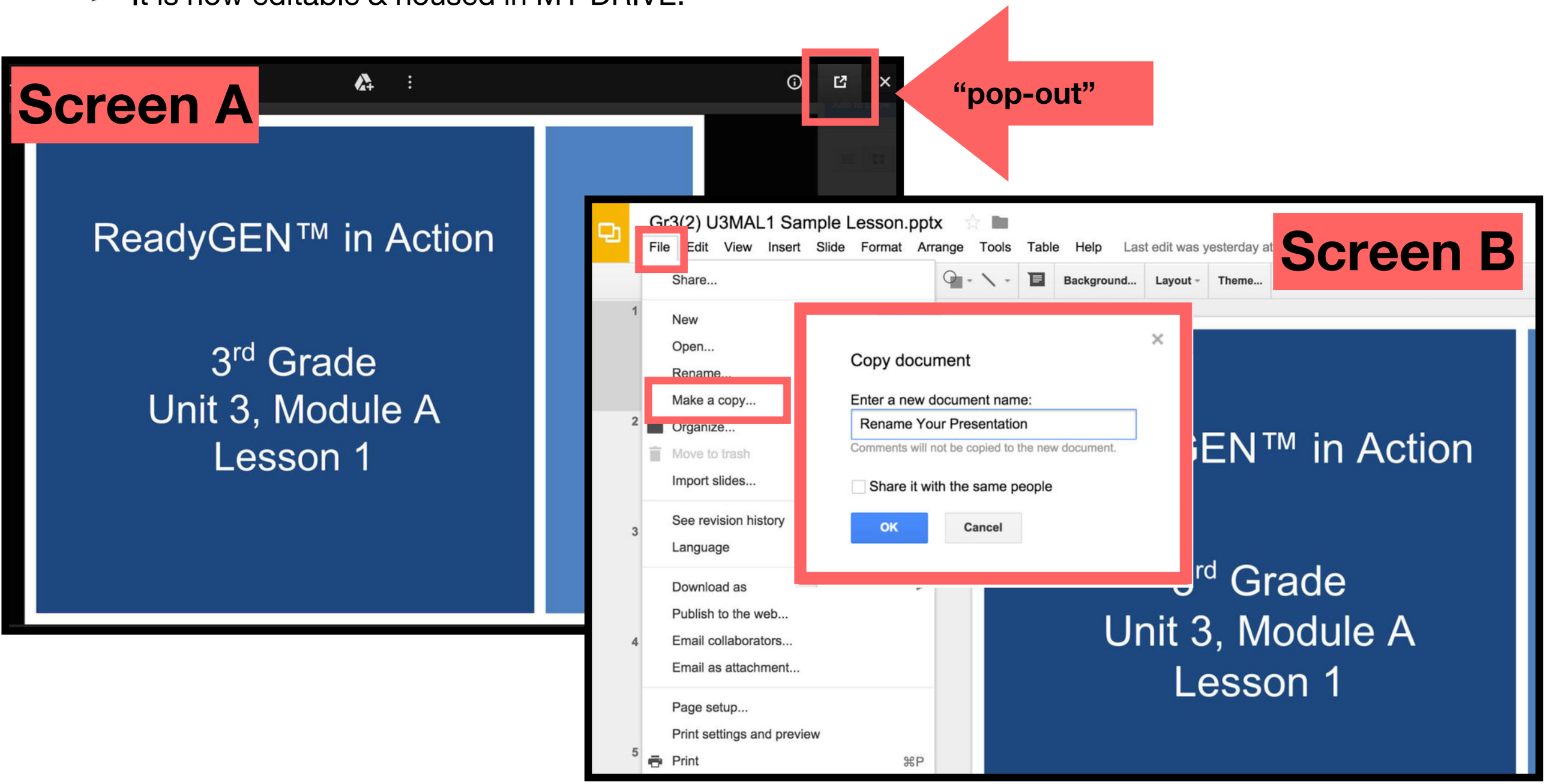
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this project!

Directions for customizing presentations are available on the next slide.

Customize this Slideshow

Reflecting your Teaching Style and Learning Needs of Your Students

- When the Google Slides presentation is opened, it will look like Screen A.
- Click on the “pop-out” button in the upper right hand corner to change the view.
- The view now looks like Screen B.
- Within Google Slides (not Chrome), choose FILE.
- Choose MAKE A COPY and rename your presentation.
- Google Slides will open your renamed presentation.
- It is now editable & housed in MY DRIVE.

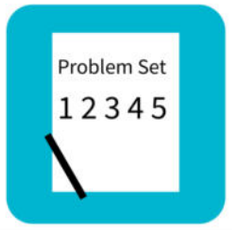


Icons

Read, Draw, Write

Learning Target

Personal White Board

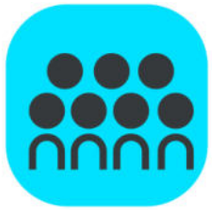


Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

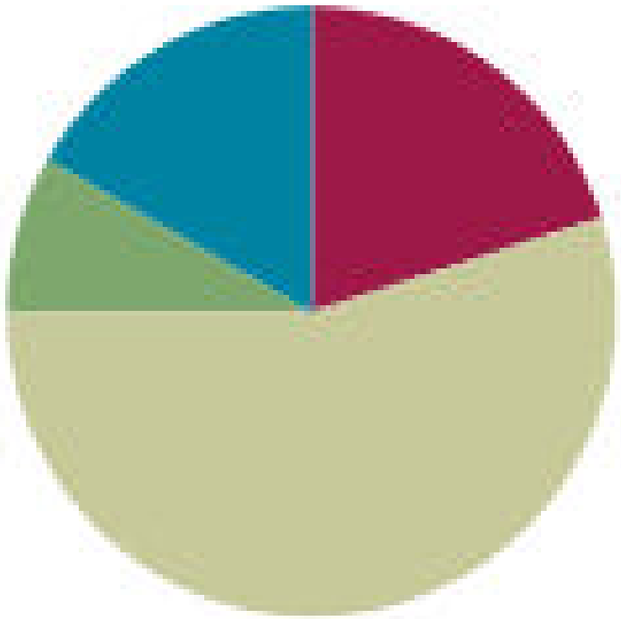
Small Group Time

Lesson 3

Objective: Create scaled bar graphs.

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Application Problem	(5 minutes)
Concept Development	(33 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



I can create scaled bar graphs.

CCSS.Math.Content.3.MD.B.3

Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories.

Fluency Practice

How many units of 6? (3 min.)

Units of 6

Count forward and backward by sixes to 60.

How many units of 6 are in 12?

What is the division sentence with the number of sixes as the quotient.

Fluency Practice

How many units of 6? (3 min.)

Units of 6

How many units of 6 are in 12?

Count forward and backward by sixes to 60.

What is the division sentence with the number of sixes as the quotient.

How many units of 6 are in 24?

How many units of 6 are in 36?

How many units of 6 are in 48?

Fluency Practice

Units of 6

A STORY OF UNITS — Lesson 3 Sprint — 3•6

A

Number Correct: _____

Multiply or Divide by 6

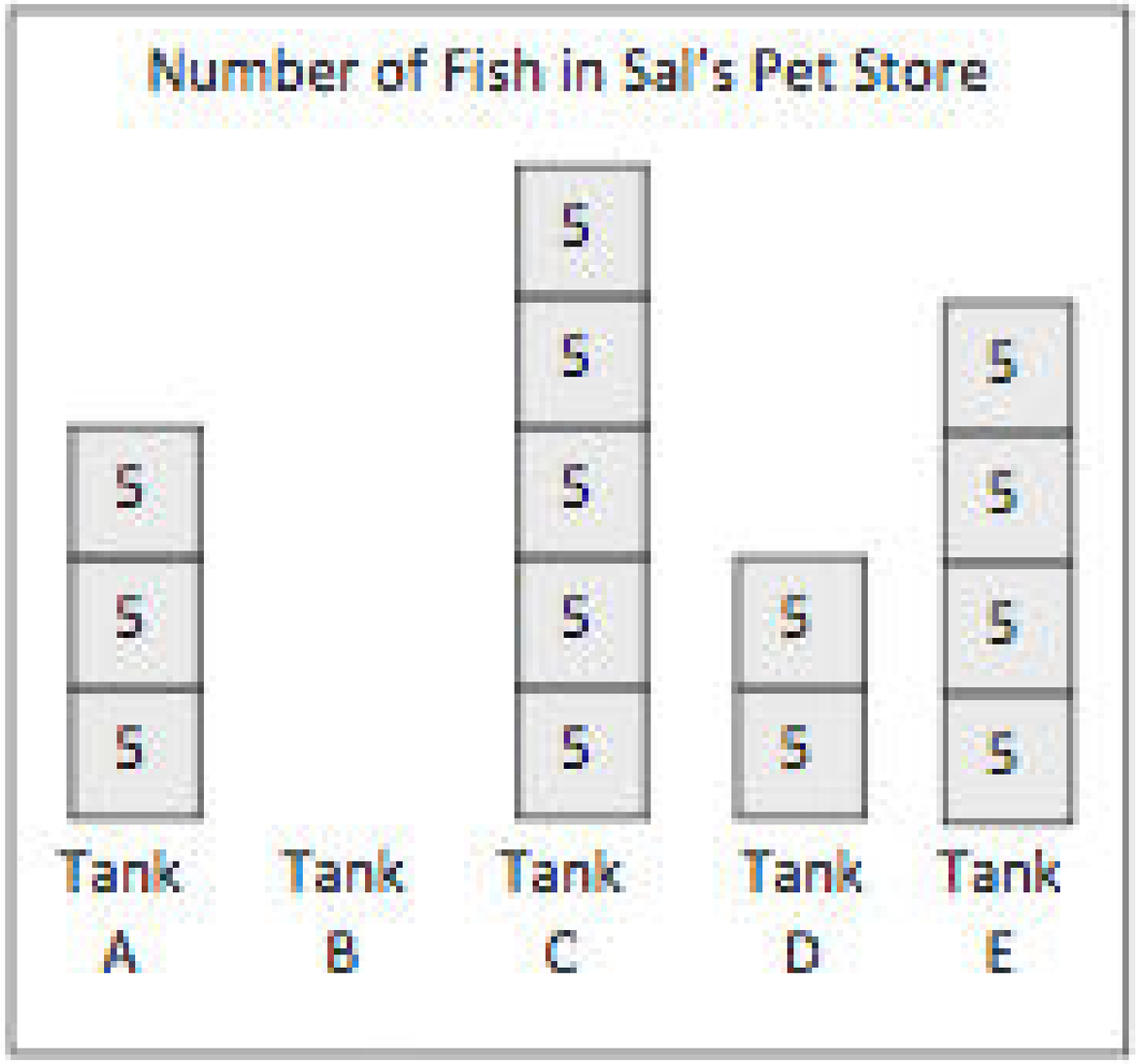
1.	2 × 6 =		23.	___ × 6 = 60	
2.	3 × 6 =		24.	___ × 6 = 12	
3.	4 × 6 =		25.	___ × 6 = 18	
4.	5 × 6 =		26.	60 ÷ 6 =	
5.	1 × 6 =		27.	30 ÷ 6 =	
6.	12 ÷ 6 =		28.	6 ÷ 6 =	
7.	18 ÷ 6 =		29.	12 ÷ 6 =	
8.	30 ÷ 6 =		30.	18 ÷ 6 =	
9.	6 ÷ 6 =		31.	___ × 6 = 36	
10.	24 ÷ 6 =		32.	___ × 6 = 42	
11.	6 × 6 =		33.	___ × 6 = 54	
12.	7 × 6 =		34.	___ × 6 = 48	
13.	8 × 6 =		35.	42 ÷ 6 =	
14.	9 × 6 =		36.	54 ÷ 6 =	
15.	10 × 6 =		37.	36 ÷ 6 =	
16.	48 ÷ 6 =		38.	48 ÷ 6 =	
17.	42 ÷ 6 =		39.	11 × 6 =	
18.	54 ÷ 6 =		40.	66 ÷ 6 =	
19.	36 ÷ 6 =		41.	12 × 6 =	
20.	60 ÷ 6 =		42.	72 ÷ 6 =	
21.	___ × 6 = 30		43.	14 × 6 =	
22.	___ × 6 = 6		44.	84 ÷ 6 =	

Sprint (60 seconds for each side)

Application Problem

The vertical tape diagrams show the number of fish in Sal's Pet Store.

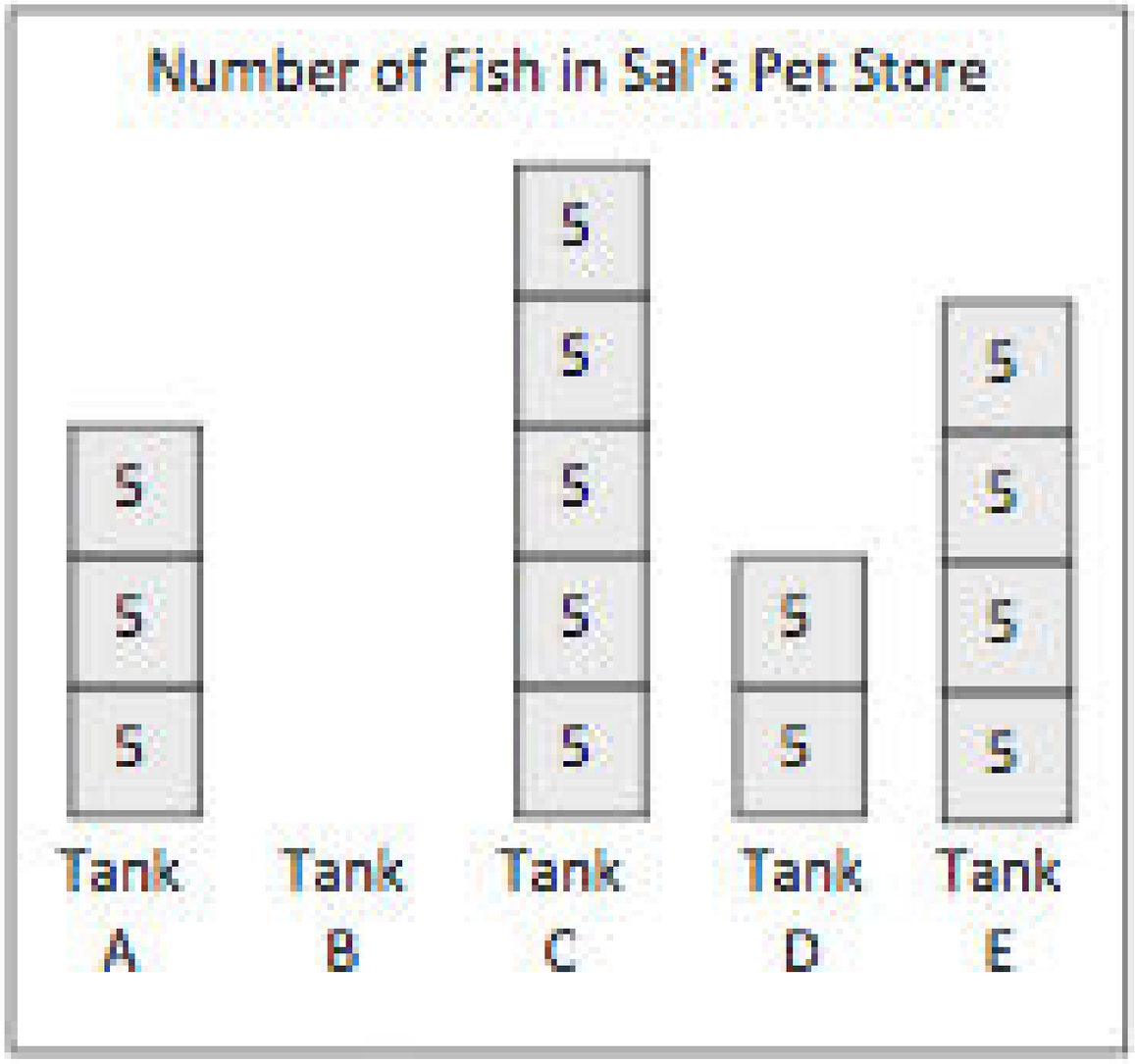
a. Find the total number of fish in Tank C. Show your work.



Application Problem

The vertical tape diagrams show the number of fish in Sal's Pet Store.

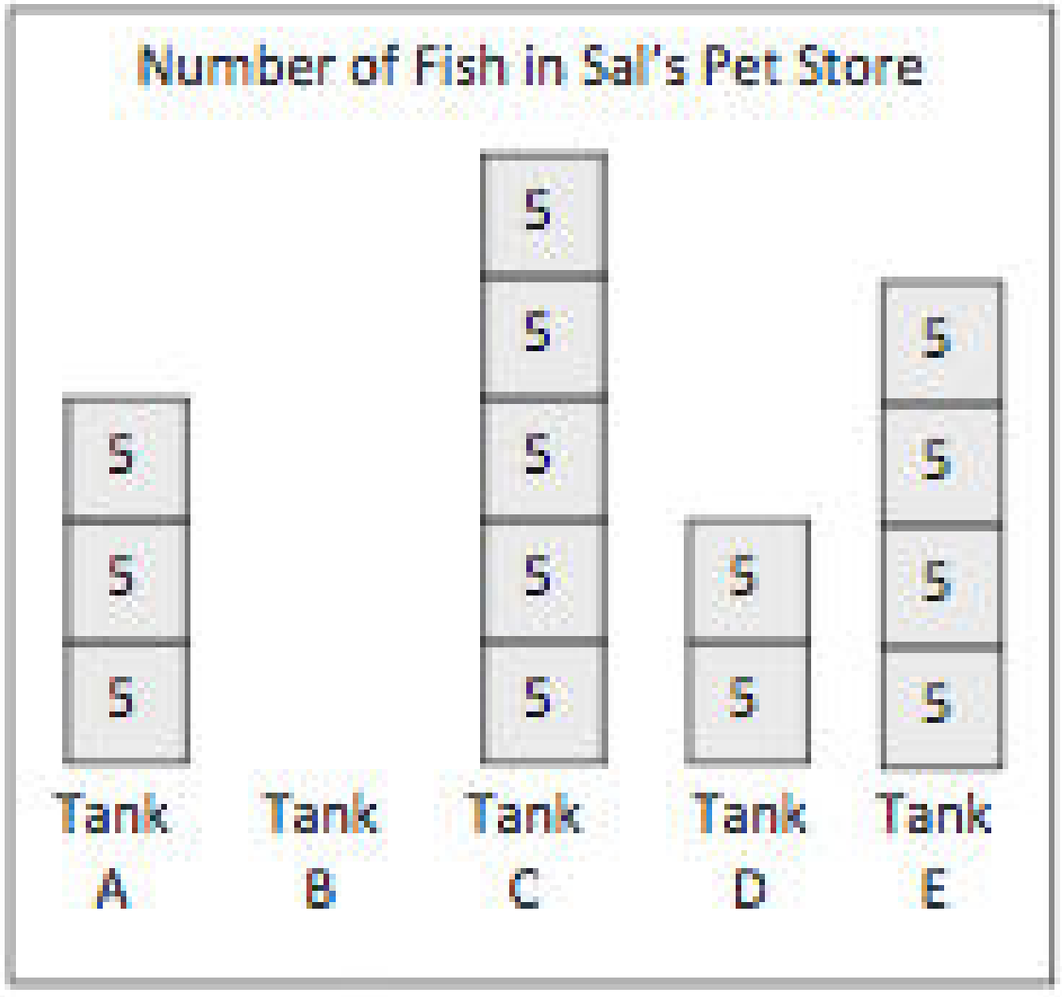
b. Tank B has a total of 30 fish. Draw the tape diagram for Tank B.



Application Problem

The vertical tape diagrams show the number of fish in Sal's Pet Store.

c. How many more fish are in Tank B than in Tanks A and D combined?



Application Problem

The vertical tape diagrams show the number of fish in Sal's Pet Store.

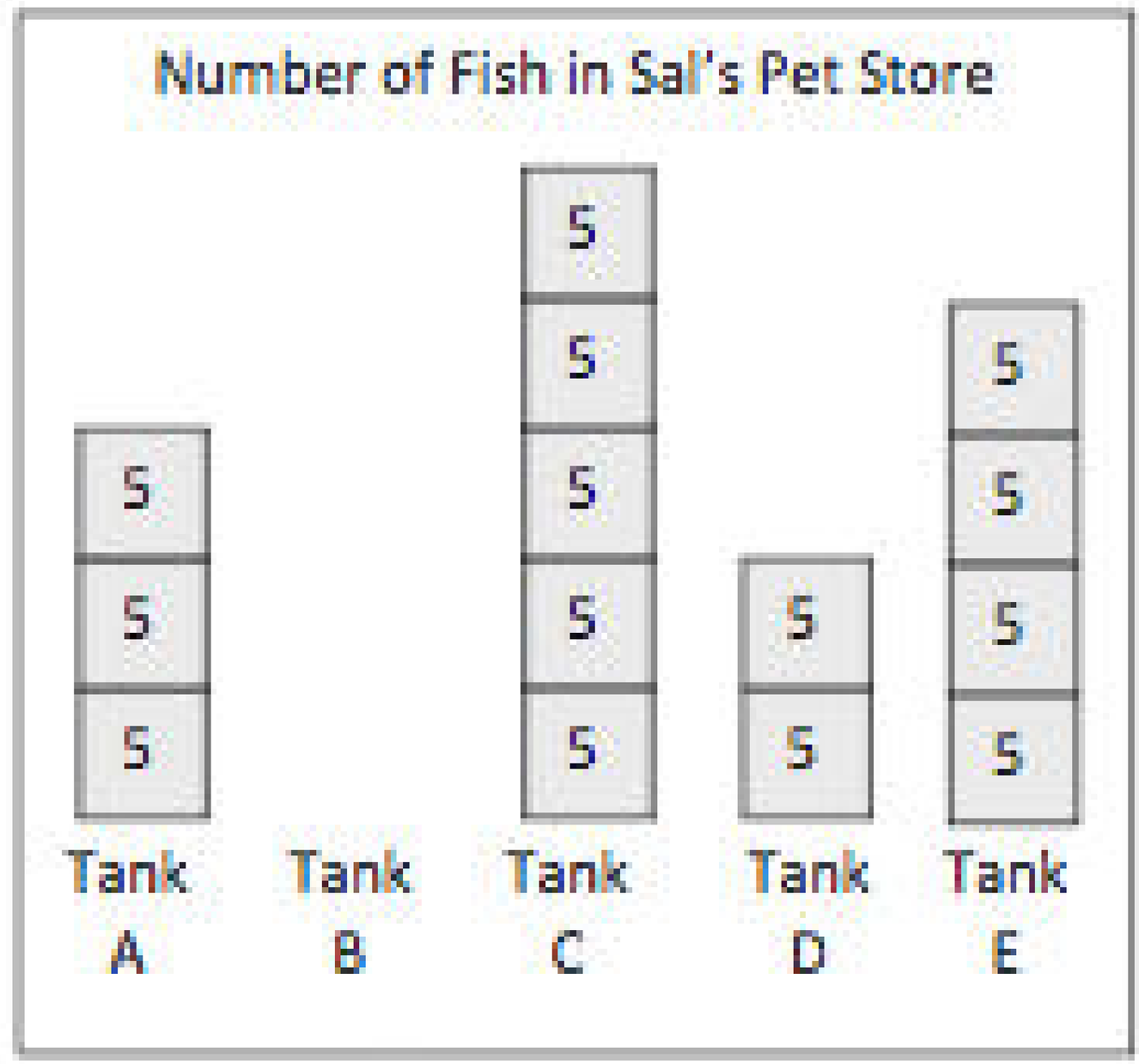
a) $5 \times 5 = 25$
There are 25 fish in Tank C.

b) 

I drew 6 units of 5 to show a total of 30 fish in Tank B.

c) Tank A + D: $5 \times 5 = 25$

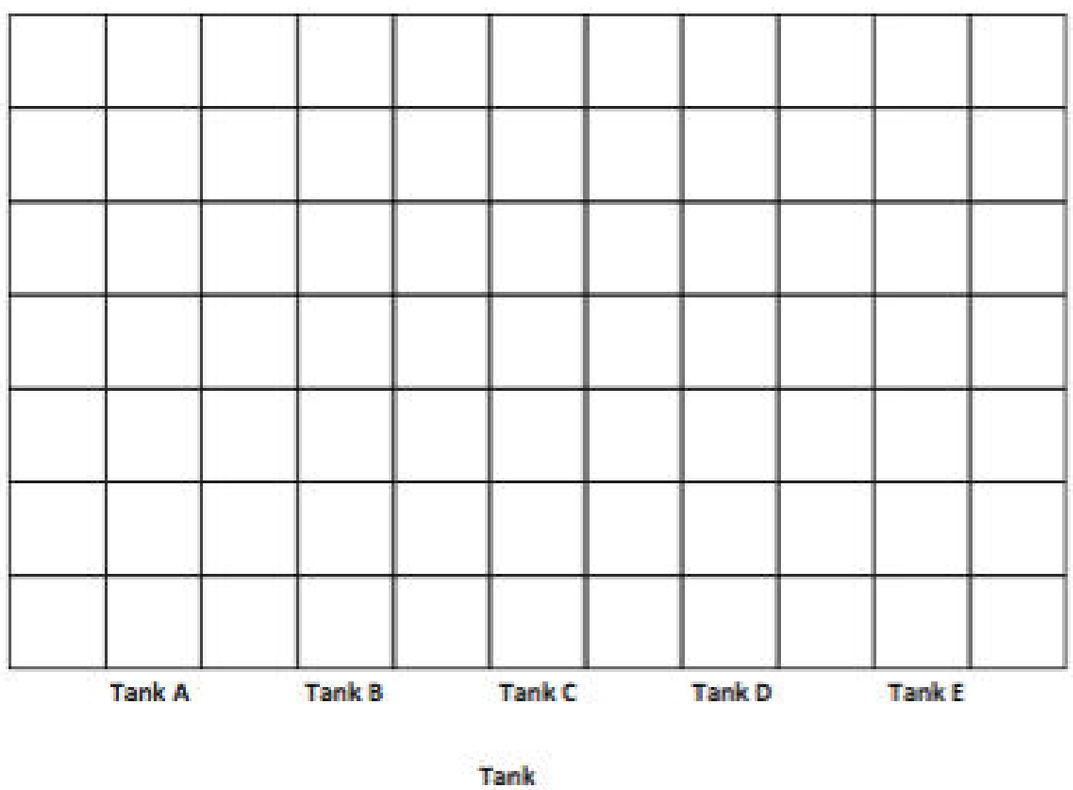
$30 - 25 = 5$
There are 5 more fish in Tank B than Tanks A and D combined.



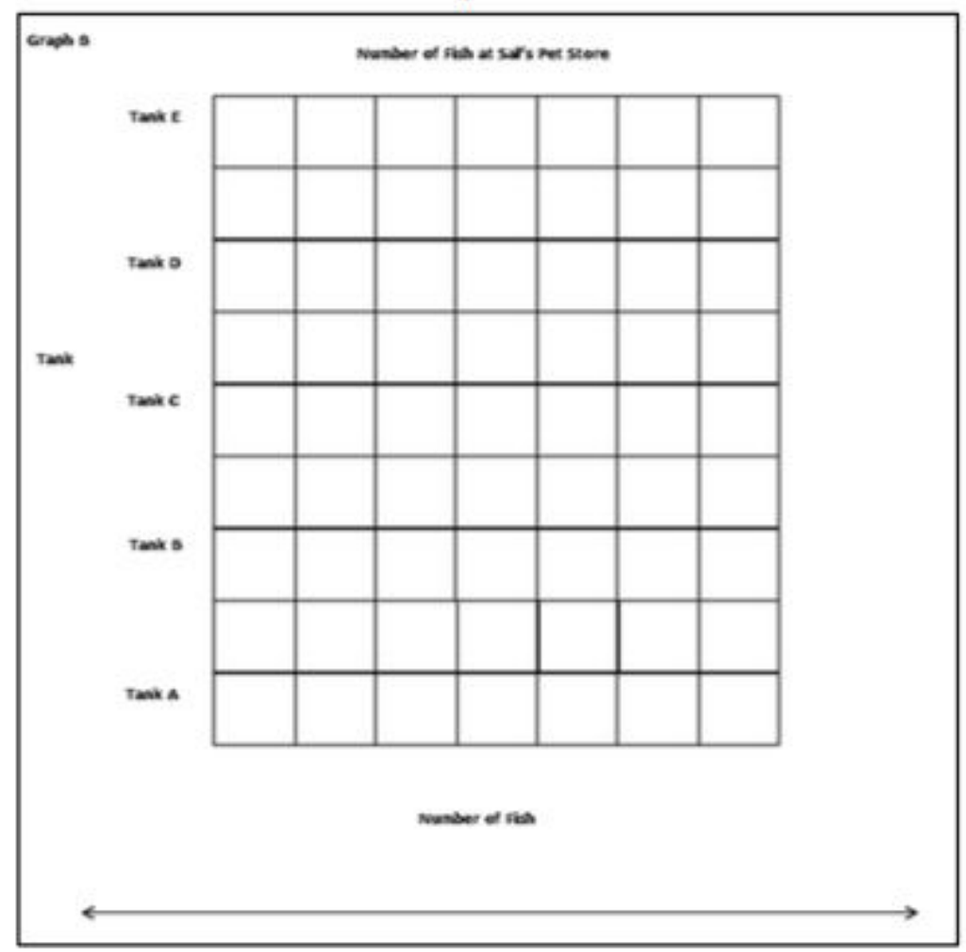
Concept Development

Students will need: Graph A (Template 1) pictured below, Graph B (Template 2) pictured below, colored pencils, straightedge

A STORY OF UNITS Lesson 3 Template 1 3•6

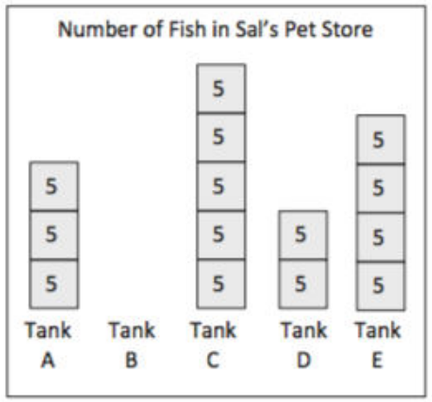


Template 2



Concept Development

Problem 1: Construct a scaled bar graph.



Use Template 1.

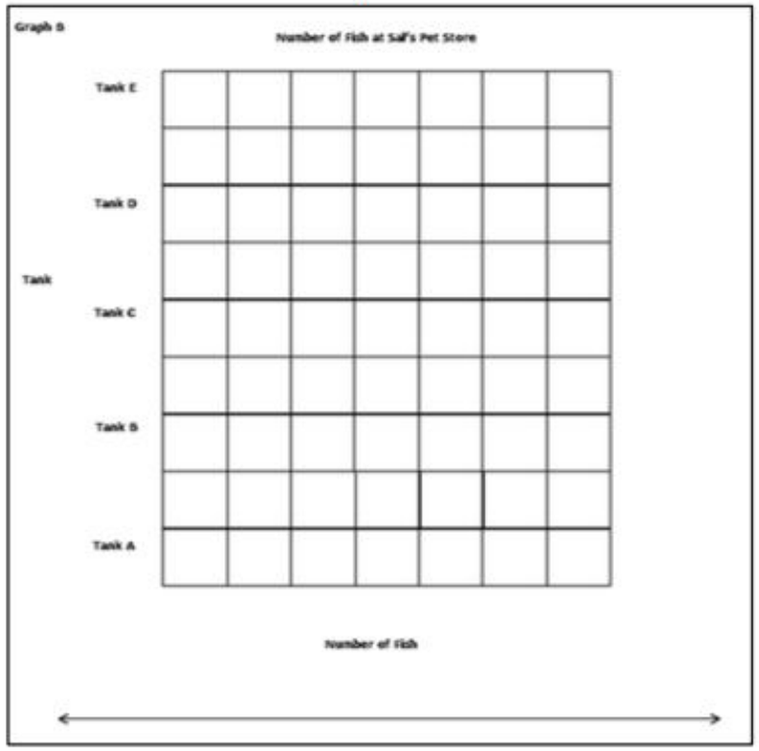
Draw the vertical tape diagrams from the Application Problem on the grid.

Outline the bars with your colored pencil.

Erase the unit labels inside the bar, and shade the entire bar with your colored pencil.

What does each square on the grid represent?

Template 2



Concept Development

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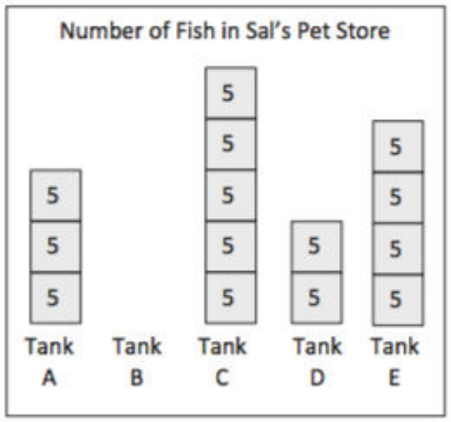

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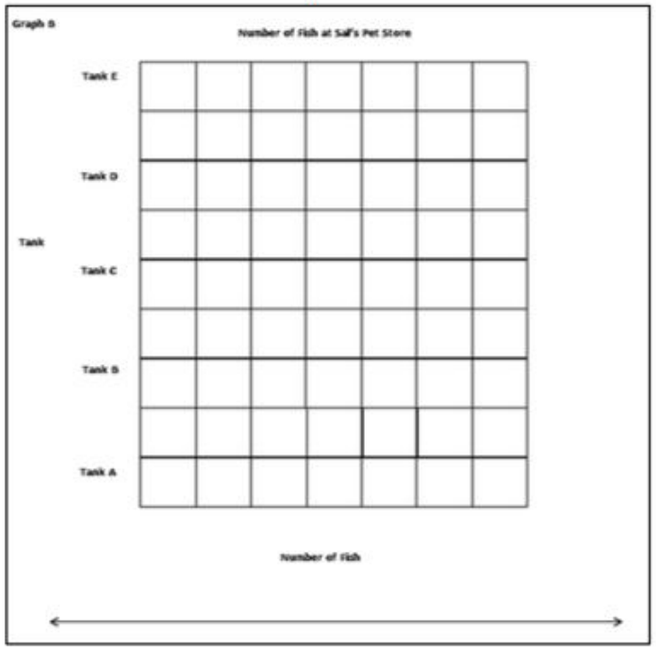
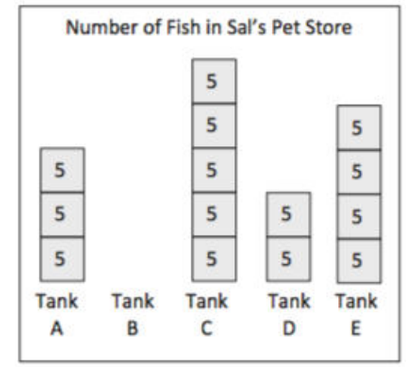


What does each square on the grid represent? 5 fish!

Concept Development

Problem 1: Construct a scaled bar graph.

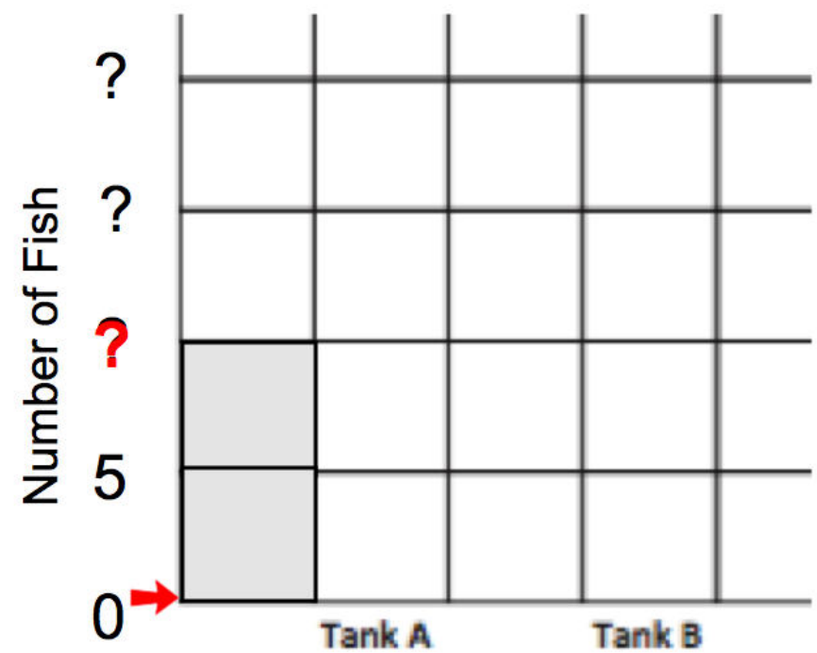


We can show what each grid represents by creating a scale on our bar graph.

Turn and talk to a partner.

What number should I write here?

How do you know?

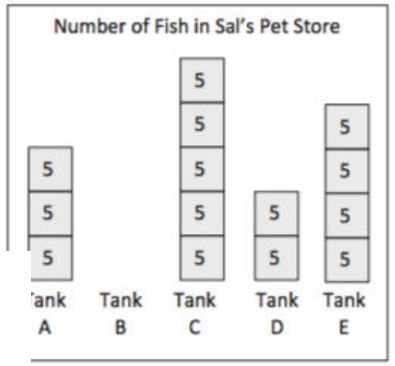


Ten because you are counting by fives. Ten because each square has a value of 5, and 2 fives is 10.

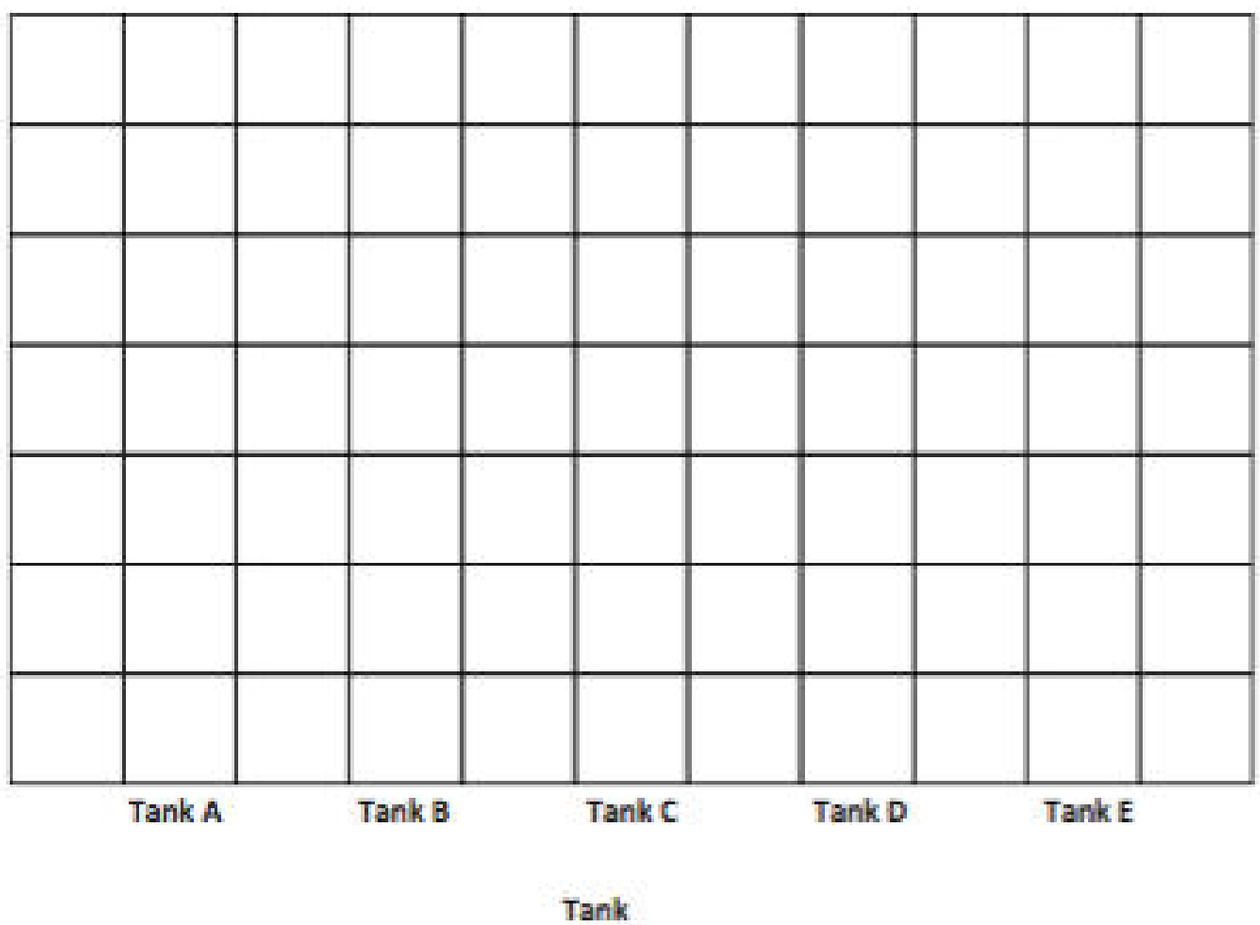
Concept Development

Problem 1: Construct a scaled bar graph.

Count by fives to complete the rest of the scale on the graph.



A STORY OF UNITS Lesson 3 Template 1 3•6



Concept Development

Problem 1: Construct a scaled bar graph.

What do the numbers on the scale tell you?

What do the labels under each bar tell you?

What is a good title for this graph?

Write the title *Number of Fish at Sal's Pet Store*.

Concept Development

Problem 1: Construct a scaled bar graph.

What do the numbers on the scale tell you? The number of fish.

Label the scale *Number of Fish*

What do the labels under each bar tell you? Which tank the bar is for.

What is a good title for this graph? Number of fish at Sal's Pet Store.

Write the title *Number of Fish at Sal's Pet Store*.

Concept Development

Problem 1: Construct a scaled bar graph.

Create a second bar graph from the data.

What do you notice about the labels on this graph?

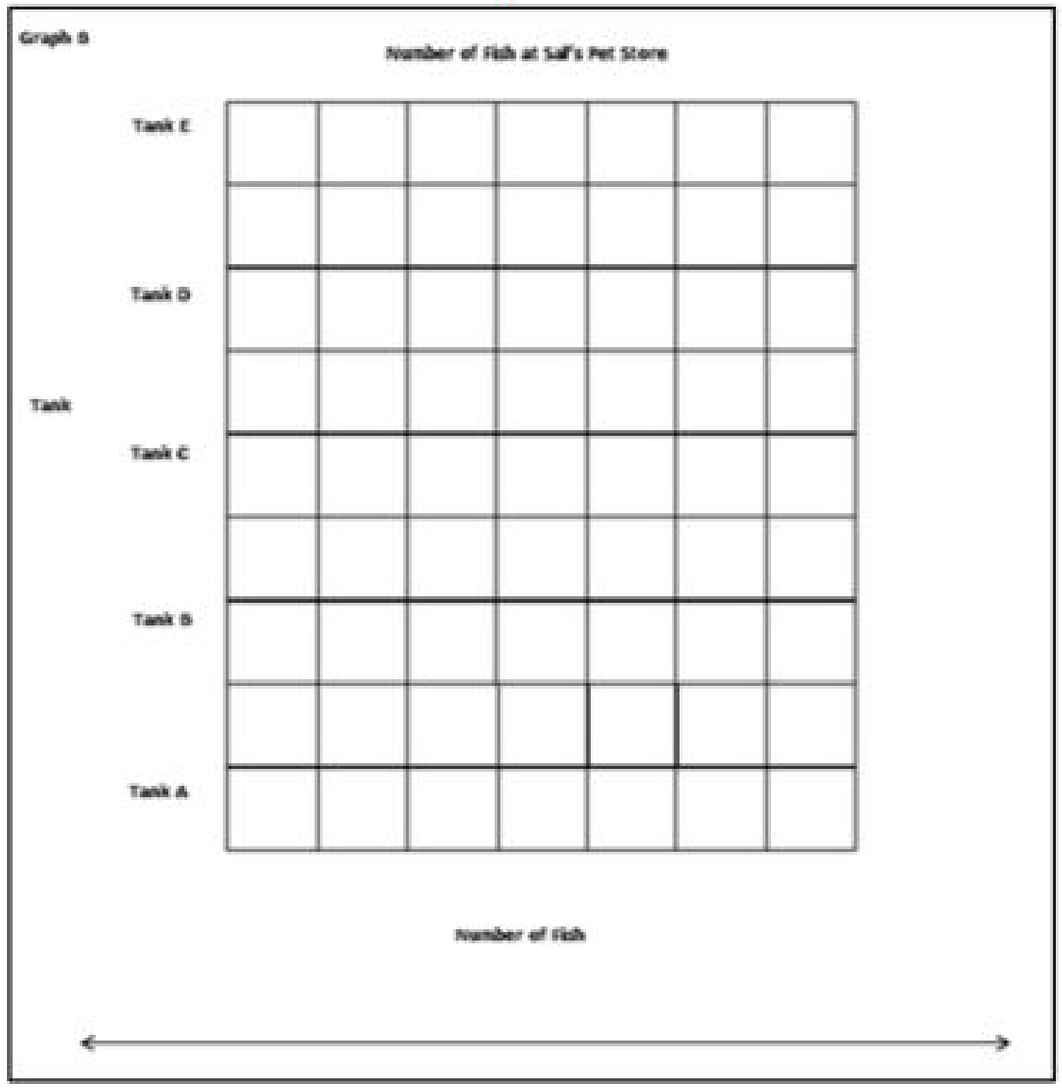
Count by fives to label your scale along the horizontal edge.

Shade in the correct number of squares for each tank. Will your bars be horizontal or vertical?

Take Graph A and turn it so the paper is horizontal.

Compare it with Graph B. What do you notice?

Template 2



Concept Development

Problem 1: Construct a scaled bar graph.
Create a second bar graph from the data.

What do you notice about the labels on this graph? The labels have switched sides.

Count by fives to label your scale along the horizontal edge.

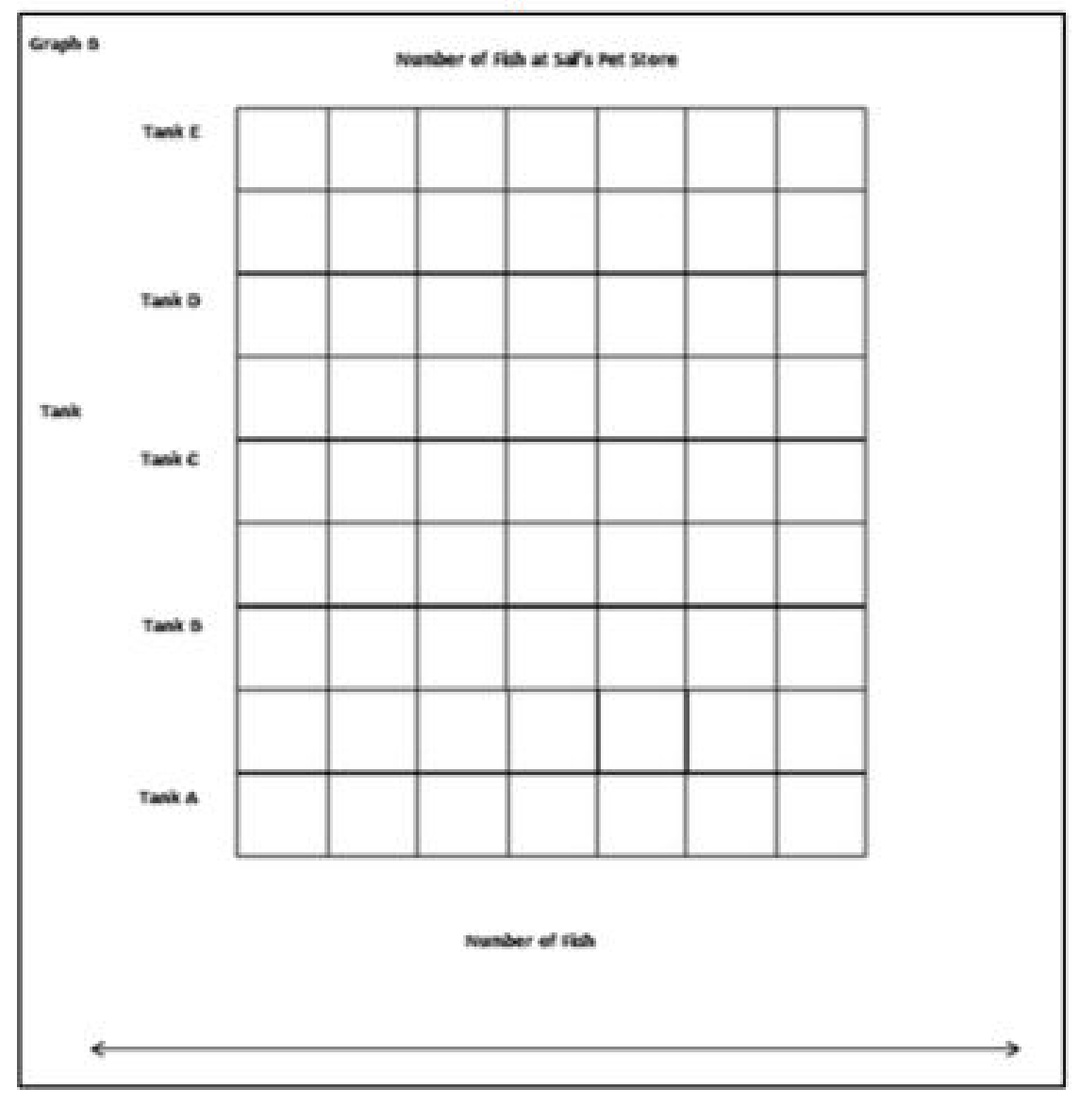
Shade in the correct number of squares for each tank.
Will your bars be horizontal or vertical? *Horizontal*

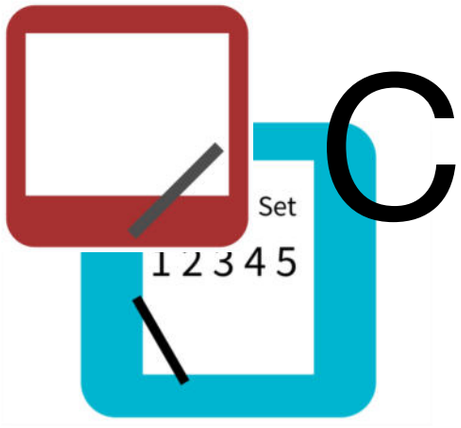
Take Graph A and turn it so the paper is horizontal.

Compare it with Graph B. What do you notice?
They are the same.

A bar graph can be drawn vertically or horizontally, depending on where you decide to put the labels, but the information stays the same as long as the scales are the same.

Template 2





Concept Development

Problem 1: Construct a scaled bar graph.

Showing other values on a bar graph.

Marcy buys 3 fish from Tank C.
Write a subtraction sentence to show how many fish are left in Tank C.

How many fish are left in Tank C?

Discuss with a partner how I can show 22 fish on the bar graph.

Even though our scale counts by fives, we can show other values for the bars by drawing the bars in between the numbers on the scale.

Concept Development

Problem 2: Plot data from a bar graph on a number line.

Use Graph B to create a number line to show the same information.

There is an empty number line below the graph.

Line up a straightedge with each column on the grid to make intervals on the number line that match the scale on the graph.

Should the intervals on the number line be labeled with the number of fish or with the tanks? Discuss with your partner.

Why? Talk to your partner.

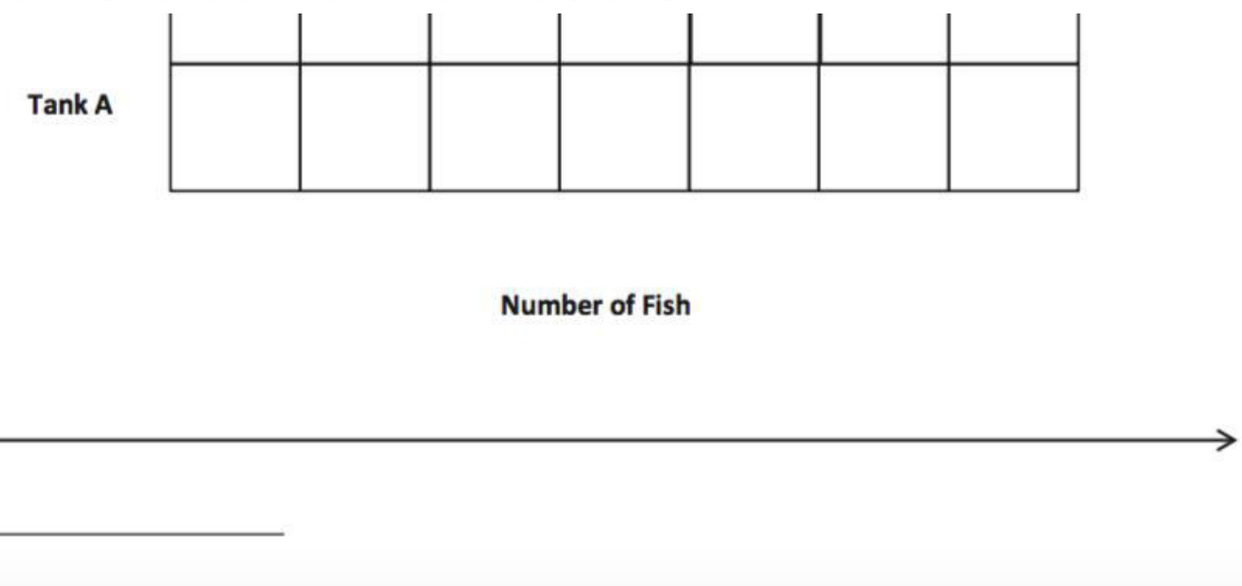
Label the intervals.

Now, work with a partner to plot and label the number of fish in each tank on the number line.

Concept Development

Problem 2: Plot data from a bar graph on a number line.

Use Graph B to create a number line to show the same information.



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Why? Talk to your partner.

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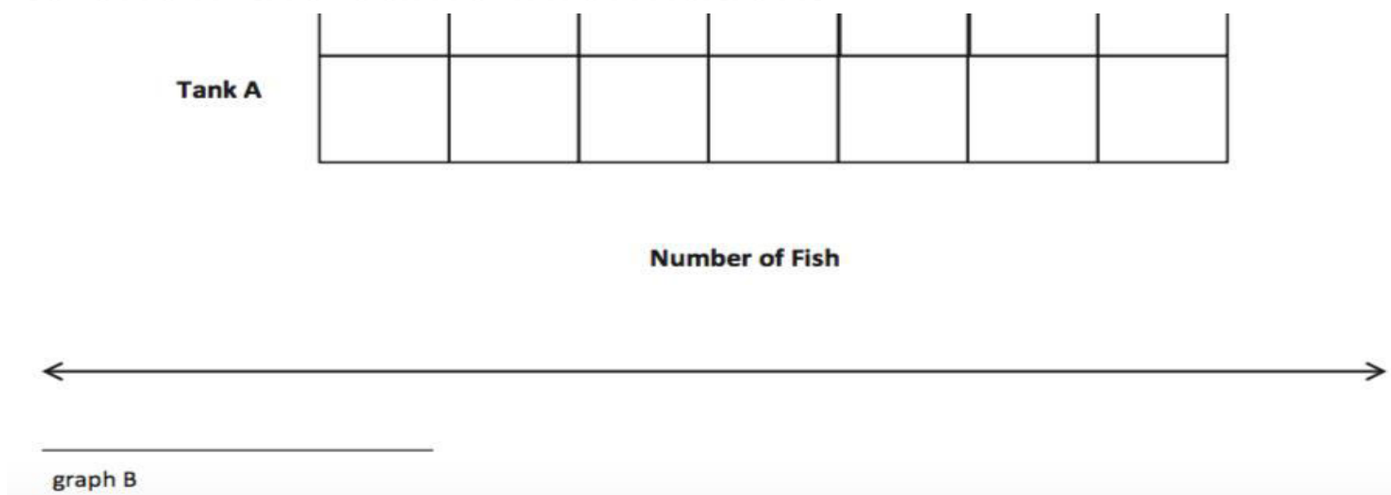


Label the intervals.

Work with a partner to plot and label the number of fish in each tank on the number line.

Talk to a partner.
Compare how the information is shown on the bar graph and the number line.

We can read different information from the 2 representations. Compare the information we can read.

A bar graph allows us to compare easily. A number line plots the information.

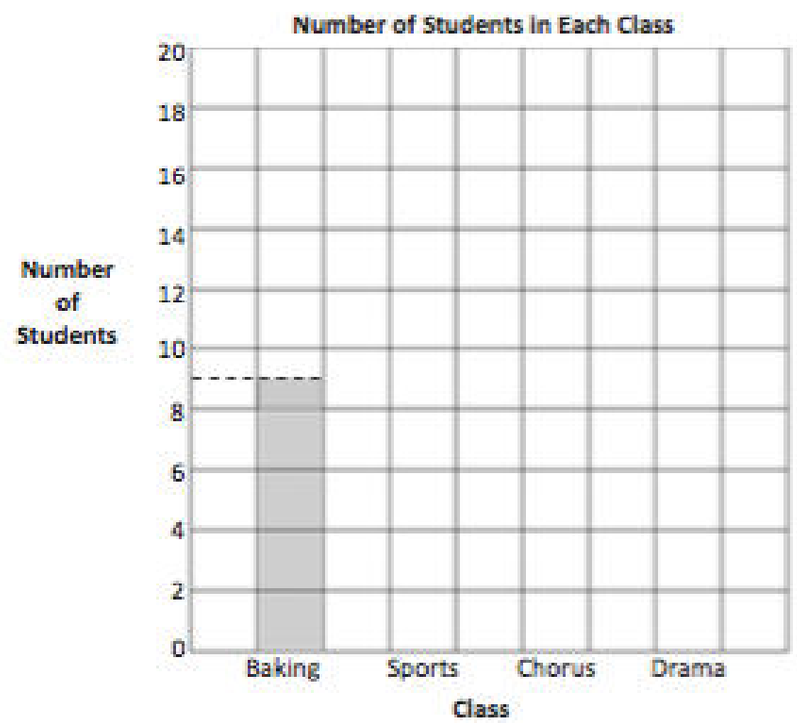
Problem Set (10 min.)

Name _____ Date _____

1. This table shows the number of students in each class.

Number of Students in Each Class	
Class	Number of Students
Baking	9
Sports	16
Chorus	13
Drama	18

Use the table to color the bar graph. The first one has been done for you.



a. What is the value of each square in the bar graph?

b. Write a number sentence to find how many total students are enrolled in classes.

c. How many fewer students are in sports than in chorus and baking combined? Write a number sentence to show your thinking.

Debrief

Does the information change when a bar graph is drawn horizontally or vertically with the same scale? Why or why not?

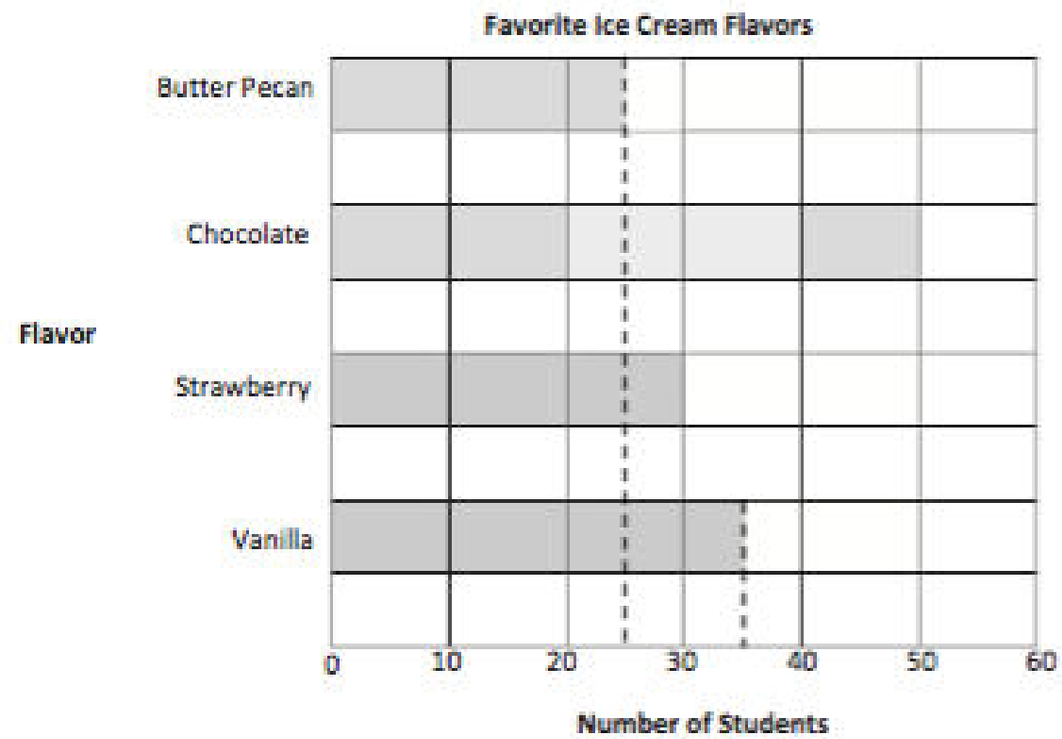
What is the purpose of a label on a bar graph?

How is a bar graph's scale more precise than a picture graph's?

Exit Ticket (3 minutes)

Name _____ Date _____

The bar graph below shows the students' favorite ice cream flavors.



a. Use the graph's lines as a ruler to draw intervals on the number line shown above. Then plot and label a point for each flavor on the number line.

b. Write a number sentence to show the total number of students who voted for butter pecan, vanilla, and chocolate.