2 Develop the Concept: Interactive

10–15 min

Interactive Learning

Overview Students will use bar diagrams to write a number sentence.

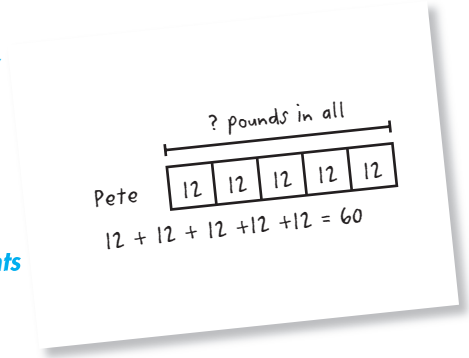
Essential Question How can a bar diagram help you solve a problem?

Engage

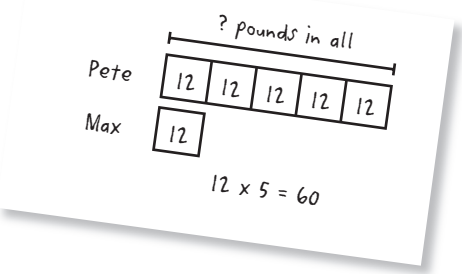
Set the Purpose *You know there are different strategies you can use to solve problems. Today, you will use pictures to help you decide how to solve a problem.*

Connect *Why would you draw a picture to help you solve a problem?* [Answers will vary.]

Pose the Problem *Sarah has two dogs. Her beagle, Max, weighs 12 pounds. Her Labrador retriever, Pete, weighs 5 times as much. How much does Pete weigh? Draw a picture and write a number sentence to solve the problem.* Give students time to work in groups to solve the problem.



Instruct in Small Steps *What do you know?* [Max weighs 12 lbs; Pete weighs 5 times as much.] *What are you asked to find?* [Pete's weight] *Let's draw a picture to represent the problem. Show a bar diagram on the board and invite students to tell you what each part represents. What does the line represent?* [Pete's weight] *Why is there one box for Max's weight, but 5 boxes for Pete's weight?* [Pete's weight is 5 times as much as Max's weight of 12 lbs.] *What operations could you use to solve this problem?* [Addition or multiplication] *What number sentence can you write for this problem?* [12 + 12 + 12 + 12 + 12 = 60 or 12 × 5 = 60] *Which operation is more efficient to use?* [Multiplication] *How many pounds does Pete weigh?* [60 lbs]



Small-Group Interaction *A snowboard costs $130. A helmet costs $42. What does it cost to buy the helmet and the snowboard?* [$130 + $42 = $172] Have students work with a partner to draw a bar diagram and write a number sentence to solve the problem.

Extend

Write a word problem that can be solved using 5 × $11. Tell why it is a multiplication situation.
[Answers will vary.]

Link to *Investigations*, Second Edition
Joint-Usage Master Plan
Blended Instruction (Plan 1):
Topic 3 and Unit 1

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