

Additional Practice 5-8

Make Sense and Persevere

Another Look!

Dex works at a dog adoption shelter. He has 4 large boxes of dog treats with 34 treats in each box and 3 small boxes with 28 treats in each box. How many bags of 20 treats can Dex make from all the treats?

You can use bar diagrams to model the steps you need to solve.



What Do You Know? There are 4 large boxes with 34 treats each and 3 small boxes with 28 treats each.

What Are You Trying to Find? The number of bags of 20 treats that Dex can make.

Use bar diagrams and equations to find the number of treats in the large and small boxes.

ℓ total treats in large boxes			
34	34	34	34

$$4 \times 34 = \ell, \ell = 136 \text{ treats}$$

Add to find the number of treats in all.

Divide to find the number of bags Dex can make with 220 treats.

Dex can make 11 bags of treats.

s total treats in small boxes		
28	28	28

$$3 \times 28 = s, s = 84 \text{ treats}$$

$$136 + 84 = 220$$

$$220 \div 20 = b, b = 11$$

In 1 and 2, solve the multi-step problems.

1. A tropical storm has been moving at 15 miles per hour for the past two days. Bess recorded that the storm moved 135 miles yesterday and 75 miles today. For how many hours has Bess been keeping track of the storm? Draw a bar diagram and write equations to help you solve.

14 hours; $135 + 75 = 210$; $210 \div 15 = 14$

2. A parking garage has 6 levels. Each level has 15 rows. Each row has the same number of parking spaces. There are 2,250 parking spaces in all. How many parking spaces are in each row? Write an equation or equations to show your work.

25 parking spaces; Sample equations: $2,250 \div 6 = 375$; $375 \div 15 = 25$.

Check students' drawings.





Performance Task

Fruit Punch

Ana's fifth-grade class is making a large batch of punch for the all-day science fair. There are 25 students in Ana's class. The ingredients they will mix together to make the punch are listed on the recipe card. The class is going to pour 12-ounce servings. How many full servings can they make?

Sample answers are given.

Fruit Punch Recipe	
Ingredient	Number of Ounces
Grape Juice	240
Apple Juice	480
Orange Juice	640
Ginger Ale	150

3. **Make Sense and Persevere** What do you know? What are you trying to find?

Students combined different amounts of different ingredients to make punch. The number of 12-ounce servings

4. **Reasoning** How are the quantities in the problem related? What steps are needed to solve the problem?

First, find the total number of ounces. Then, divide the sum by 12. The quotient is the number of full servings.

5. **Model with Math** Write equations with variables to represent the steps needed to solve the problem.

$$t = 240 + 480 + 640 + 150; s = t \div 12$$

6. **Be Precise** Solve the equations and answer the problem.

**$240 + 480 + 640 + 150 = 1,510$;
 $1,510 \div 12 = 125 \text{ R}10$; 125 twelve-ounce servings can be poured.**

7. **Critique Reasoning** Alejandro says that the division has remainder 10, so one more serving can be poured. Do you agree? Explain.

No; Sample explanation: Remainder 10 means that 10 ounces are left after 125 servings are poured. There is not enough punch left to make another full 12-ounce serving.

Think about the steps needed to solve the problem!

