

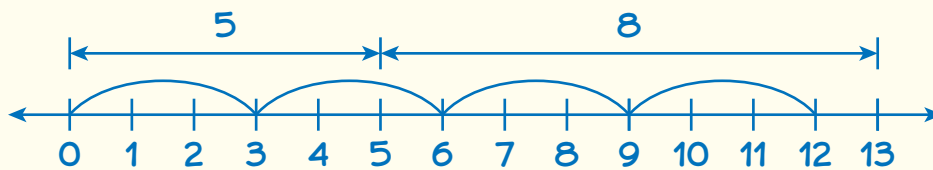
Refine Modeling and Solving Multi-Step Problems

Complete the Example below. Then solve problems 1–8.

EXAMPLE

Santo and his cousin make Mexican rice. Each batch uses 3 tomatoes. Santo has 5 tomatoes and his cousin has 8 tomatoes. Write and solve an equation to find how many batches of Mexican rice they make. Do they have any tomatoes left over?

Look at how you could show your work using a model.



Let b = number of batches

$$b = (5 + 8) \div 3$$

$$b = 13 \div 3$$

$$13 \div 3 \rightarrow 4 \text{ R } 1$$

Solution

The student could estimate the answer to check whether it is reasonable!



PAIR/SHARE

Discuss the reasonableness of the answer.

APPLY IT

- 1 A farm has 18 chickens. That is 3 times the number of sheep the farm has. Write and solve an equation to find how many chickens and sheep the farm has altogether. Check the reasonableness of your answer. Show your work.

Solution

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How many sheep does the farm have?

PAIR/SHARE

Do you get the same answer if you write the equation a different way?

- 2 Dagny earns \$5 each time she walks her neighbor's dog. She has already earned \$25. Write and solve an equation to find out how many more times Dagny needs to walk the dog to earn enough to buy a bike that costs \$83. Check the reasonableness of your answer. Show your work.

What does the remainder tell you?



Solution

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- 3 Tiana sells 47 boxes of oranges for a fundraiser. Nikil sells 12 fewer boxes than Tiana. How many more boxes of oranges does Nikil need to sell in order to sell 60 boxes?

- Ⓐ 1
- Ⓑ 25
- Ⓒ 35
- Ⓓ 48

Eldora chose Ⓐ as the correct answer. How did she get that answer?

PAIR/SHARE

What would happen if Dagny did not think about the remainder?

A picture can help make sense of all the numbers!

PAIR/SHARE

Compare the strategies you both used to solve the problem.