Fraction Division Problems

Lesson 5-14

DATE TIME

For Problems 1 and 2, write a number model using a letter for the unknown. Solve, showing your solution strategy. Summarize your work with a division number model. Check your answer using multiplication and write a number sentence to show how you checked.

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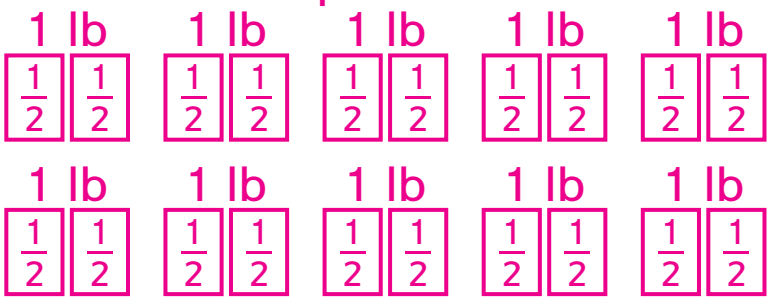
1 How many $\frac{1}{2}$-pound boxes of nuts can be made from 10 pounds of nuts?

Number model: $10 \div \frac{1}{2} = b$, or $b * \frac{1}{2} = 10$

Sample model:



Solution: 20 $\frac{1}{2}$-pound boxes of nuts can be made.

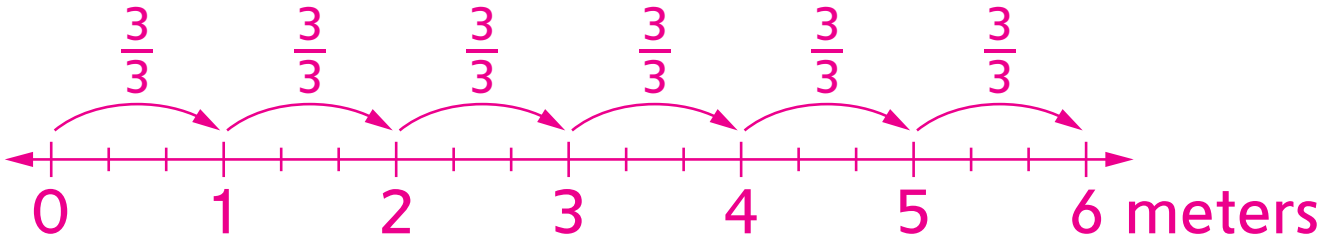
Summary number model: $10 \div \frac{1}{2} = 20$

Check with multiplication: $20 * \frac{1}{2} = \frac{20}{2} = 10$

2 Darcy has 6 meters of yarn. She wants to cut the yarn into $\frac{1}{3}$-meter pieces to make necklaces with a kindergarten class. If she uses all 6 meters of yarn, how many $\frac{1}{3}$-meter pieces will Darcy have?

Number model: $6 \div \frac{1}{3} = p$, or $\frac{1}{3} * p = 6$

Sample model:



Solution: Darcy will have 18 $\frac{1}{3}$-meter pieces of yarn.

Summary number model: $6 \div \frac{1}{3} = 18$

Check with multiplication: $18 * \frac{1}{3} = \frac{18}{3} = 6$

5.NF.7, 5.NF.7b, 5.NF.7c, SMP4

Fraction Division Problems (continued)

3 Write a number story for $5 \div \frac{1}{4}$.

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Number story: Sample answer: Sienna has 5 pies. If she cuts each pie into $\frac{1}{4}$-sized pieces, how many pieces of pie will she have?

Solve your number story. Draw a picture to show your solution strategy.

Drawings vary.

Solution: 20 (units vary)

Summary number model: $5 \div \frac{1}{4} = 20$

Check with multiplication: $20 * \frac{1}{4} = \frac{20}{4} = 5$

4 When you divide a whole number by a fraction less than 1, is the quotient larger or smaller than the whole number? Explain.

Sample answer: The quotient is larger than the whole number because you are finding how many small parts fit into something that is larger.

 5.NF.7, 5.NF.7b, 5.NF.7c, SMP4