Divide Using Partial Quotients

Essential Question How can you use partial quotients to divide by 1-digit divisors?

Vulock the Problem

At camp, there are 5 players on each lacrosse team. If there are 125 people on lacrosse teams, how many teams are there?

One Way Use partial quotients.

In the **partial quotient** method of dividing, multiples of the divisor are subtracted from the dividend and then the partial quotients are added together.

Divide. 125 ÷ 5 Write. 5)125

STEP 1

Start by subtracting a greater multiple, such as 10 times the divisor. For example, you know that you can make at least 10 teams of 5 players.

Continue subtracting until the remaining number is less than the multiple, 50.

STEP 2

Subtract smaller multiples, such as 5, 2, or 1 times the divisor until the remaining number is less than the divisor. In other words, keep going until you no longer have enough players to make a team.

Then add the partial quotients to find the quotient.

So, there are _____ lacrosse teams.

Lesson 4.8

Common Core Number and Operations in Base Ten—4.NBT.B.6 MATHEMATICAL PRACTICES MP2, MP7, MP8

- Underline what you are asked to find.
- Circle what you need to use.
- What operation can you use to find the number of teams?



Another Way Use rectangular models to record the partial quotients.

Jarod and Ana also found the number of teams using partial quotients. They recorded the partial quotients using rectangular models. They each still had 25 as the quotient.



is a lacrosse field? (3 feet = 1 yard)

Divide. Use partial quotients.



So, the lacrosse field is _____ yards long.



Divide. Use rectangular models to record the partial quotients.

8. 328 ÷ 2 =	9. 475 ÷ 5 =	10. 219 ÷ 3 =	11. 488 ÷ 4 =
	•	•	

12. MATHEMATICAL O Use Reasoning What is the least number you can divide by 5 to get a three-digit quotient? Explain how you found your answer.

Common MATHEMATICAL PRACTICES COMMUNICATE • PERSEVERE • CONSTRUCT ARGUMENTS

Problem Solving • Applications 🎇

Use the table for 13-15.

- **13.** Rob wants to put 8 baseball cards on each page in an album. How many pages will he fill?
- **14. CODEFFER** Rob filled 5 plastic boxes with hockey cards. There were the same number of cards in each box. How many cards did he put in each box? How many cards were left over?
- **15. THINK SMARTER** Rob filled 3 fewer plastic boxes with football cards than basketball cards. He filled 9 boxes with basketball cards. How many boxes did he fill with football cards? How many football cards were in each box?



WRITE Math • Show Your Work







© Houghton Mifflin Harcourt Publishing Company



4. 246 ÷ 3 = _____

5. 126 ÷ 2 = _____

6. $605 \div 5 =$ _____

Divide. Use either way to record the partial quotients.

7. $492 \div 3 =$ **8.** $198 \div 9 =$ **9.** $692 \div 4 =$



Problem Solving Real

- **10.** Allison took 112 photos on vacation. She wants to put them in a photo album that holds 4 photos on each page. How many pages can she fill?
- **11. WRITE** *Math* Explain how to use partial quotients to divide 235 by 5.

Lesson Check (4.NBT.B.6)

- Annaka used partial quotients to divide 145 ÷ 5. What could be the partial quotients Annaka used?
- 2. Mel used partial quotients to find the quotient of 378 ÷ 3. What could be the partial quotients that Mel found?

Spiral Review (4.NBT.B.5, 4.NBT.B.6)

- **3.** What are the partial products of 42×5 ?
- **4.** Mr. Watson buys 4 gallons of paint that cost \$34 per gallon. How much does Mr. Watson spend on paint?

5. Use the area model to find the product of 28×32 .



6. An adult male lion eats about 108 pounds of meat per week. About how much meat does an adult male lion eat in one day?

