

NAME _____

Module 2 Whole Number Operations
Lesson 4 Large Numbers: Division

Challenge Problems

2.4

Set 1

- 1 Compare the Partial Quotients Method of Division to the Standard Method of Division and explain how both methods get the same results.
- 2 Write and solve three problems to show three different ways that remainders may be interpreted.
- 3 Make and solve a division problem with a dividend of 57 and a divisor of three.
- 4 Make and solve a division problem with a quotient of 26 and a remainder of three.

Possible Answers:

- With the Partial Quotients Method, estimation is used to take away multiples of the divisor from the dividend. Then, all of the partial quotients are added to get a final quotient. In the Standard Method, place value and regrouping are used to divide the dividend into equal sets. In both methods, multiples of the divisor are taken away from the dividend until a number smaller than the dividend is obtained. The results are equal because in both methods the sums of the numbers taken away are equal.

Partial Quotients Standard

4	=	44
20	=	9
20	=	36
9	=	36
180	=	36
216	=	0
180	=	
36	=	
36	=	
0	=	

- Increase the quotient.

Owen buys doughnuts for a party. The doughnuts are sold in packs of 12. He needs 130 doughnuts. How many packs must he buy?

$$\begin{array}{r} 10 \text{ R}10 \\ 12 \overline{)130} \\ \underline{120} \\ 10 \\ \underline{0} \\ 10 \end{array}$$

Owen needs 11 packs.

Use the remainder as the answer.

Sasha had 147 gum drops. She gave each of 12 friends an equal number of gum drops. She kept the rest for herself. How many gum drops did Sasha keep for herself?

$$\begin{array}{r} 12 \text{ R}3 \\ 12 \overline{)147} \\ \underline{120} \\ 27 \\ \underline{24} \\ 3 \end{array}$$

Sasha kept three gum drops.

NAME _____

Module 2 Whole Number Operations
Lesson 4 Large Numbers: Division

Drop the remainder.

Coach Finney has \$189 to buy new balls for the soccer team. If each soccer ball costs \$17 , how many soccer balls can he buy?

$$\begin{array}{r} 11 \text{ R}2 \\ 17 \overline{)189} \\ \underline{170} \\ 19 \\ \underline{17} \\ 2 \end{array}$$

Coach Finney can buy 11 balls.

3. Omar bought three identical moon rocks for 57 moon dollars. How much does one moon rock cost?

$$\begin{array}{r} 19 \\ 3 \overline{)57} \\ \underline{30} \\ 27 \\ \underline{27} \\ 0 \end{array}$$

One moon rock costs 19 moon dollars.

4. Byron had 107 marbles that he divided into four equal piles. How many marbles were in each pile and how many marbles were left over?

$$\begin{array}{r} 26 \text{ R}3 \\ 4 \overline{)107} \\ \underline{80} \\ 27 \\ \underline{24} \\ 3 \end{array}$$

26 marbles in each pile; 3 marbles left over

