LESSON MAKER PRO

Division Power

Use the standard algorithm to divide multi-digit numbers.

GRADE 6 · NY-6.NS.2

NY-6.NS.2 "Fluently divide multi-digit numbers using a standard algorithm."

NAME _____ DATE _____

DIVIDE STEP BY STEP

Divide from left to right, using as many digits of the dividend as you need. After each division step, multiply, subtract, and bring down the next digit. A remainder must be less than the divisor.

WORKED EXAMPLE

Divide 4,872 by 16 using the standard algorithm.

1. 16 goes into 48 three times. Write 3. Multiply 3 × 16 = 48, then subtract 48 - 48 = 0.
2. Bring down 7. Since 16 goes into 7 zero times, write 0 in the quotient. Bring down 2 to make 72.
3. 16 goes into 72 four times. Write 4. Multiply 4 × 16 = 64, then subtract 72 - 64 = 8.
4. The remainder is 8, and 8 is less than 16.

Answer: 304 R8

PRACTICE 6 problems

1 936 ÷ 12 =

ANSWER _____

2 2,184 ÷ 7 =

ANSWER _____

3 3,675 ÷ 15 =

ANSWER _____

4 5,824 ÷ 28 =

ANSWER _____

5 7,056 ÷ 24 =

ANSWER _____

6 4,913 ÷ 18 =

ANSWER _____

APPLY IT Show your work

1 A gaming club has 3,456 digital cards. The club puts the cards into 24 equal packs for a tournament. How many cards are in each pack?

WORK SPACE

ANSWER _____

2 A robotics team has 6,912 screws. They sort the screws equally into 36 building kits. How many screws are in each kit?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Divide 48,672 by 36 using the standard algorithm. Then explain why your quotient is reasonable by using an estimate.

WORK SPACE AND ANSWER

ANSWER KEY

Division Power

GRADE 6 · NY-6.NS.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	936 ÷ 12 =	**78**
2	2,184 ÷ 7 =	**312**
3	3,675 ÷ 15 =	**245**
4	5,824 ÷ 28 =	**208**
5	7,056 ÷ 24 =	**294**
6	4,913 ÷ 18 =	**272 R17**

PART 2 · APPLY IT

1. **144 cards in each pack** Divide 3,456 by 24. The quotient is 144.
2. **192 screws in each kit** Divide 6,912 by 36. The quotient is 192.

CHALLENGE

1,352; sample reasoning: 48,672 is about 48,600, and 48,600 ÷ 36 = 1,350, so 1,352 is reasonable.

Accept standard remainder notation such as 272 R17 or 272 remainder 17. For the challenge estimate, accept another accurate estimate that supports the quotient.