LESSON MAKER PRO

Decimal Division Quest

Estimate, then divide to the thousandths place.

GRADE 5 · 5.CE.3.c.ii

5.CE.3.c.ii "Estimate and determine the quotient of two numbers using strategies and algorithms, including the standard algorithm, in which:* quotients may include whole numbers, tenths, hundredths, or thousandths;"

NAME _____ DATE _____

PLACE THE DECIMAL

First, estimate by rounding to numbers that are easy to divide. In the standard algorithm, place the decimal point in the quotient directly above the decimal point in the dividend. Divide one place at a time, and, for these problems, annex at most one zero to the dividend if another place is needed.

WORKED EXAMPLE

Estimate and find 14.35 / 5.

1. Estimate: 15 / 5 = 3, so the quotient should be close to 3.
2. Divide 14 by 5 to get 2 with a remainder of 4. Place the decimal point in the quotient.
3. Divide 43 tenths by 5 to get 8 tenths with a remainder of 3.
4. Divide 35 hundredths by 5 to get 7 hundredths.

Answer: 14.35 / 5 = 2.87

PRACTICE 6 problems

1 Estimate, then use the standard algorithm: 48 / 6 = ___

ANSWER _____

2 Estimate, then use the standard algorithm: 7.2 / 3 = ___

ANSWER _____

3 Estimate, then use the standard algorithm: 4.56 / 6 = ___

ANSWER _____

4 Estimate, then use the standard algorithm: 8.424 / 4 = ___

ANSWER _____

5 Estimate, then use the standard algorithm: 15 / 6 = ___

ANSWER _____

6 Estimate, then use the standard algorithm: 3.375 / 5 = ___

ANSWER _____

APPLY IT Show your work

1 A student council has 12.48 yards of ribbon to make 6 matching banners. Estimate, then find how many yards of ribbon each banner gets.

WORK SPACE

ANSWER _____

2 A coding club splits a 7.125-gigabyte project file into 5 equal downloads. Estimate, then find the size of each download.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Challenge: A science team has 18.564 liters of water to pour equally into 6 containers. Estimate, then use the standard algorithm to find the number of liters in each container.

WORK SPACE AND ANSWER

ANSWER KEY

Decimal Division Quest

GRADE 5 · 5.CE.3.c.ii

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Estimate, then use the standard algorithm: 48 / 6 = ___	**8**
2	Estimate, then use the standard algorithm: 7.2 / 3 = ___	**2.4**
3	Estimate, then use the standard algorithm: 4.56 / 6 = ___	**0.76**
4	Estimate, then use the standard algorithm: 8.424 / 4 = ___	**2.106**
5	Estimate, then use the standard algorithm: 15 / 6 = ___	**Estimate: 3 from 18 / 6; quotient: 2.5**
6	Estimate, then use the standard algorithm: 3.375 / 5 = ___	**0.675**

PART 2 · APPLY IT

1. **2.08 yards** Divide 12.48 by 6. Each banner gets 2.08 yards of ribbon.
2. **1.425 gigabytes** Divide 7.125 by 5. Each download is 1.425 gigabytes.

CHALLENGE

Estimate: 3 liters from 18 / 6; exact: 3.094 liters. Check: 3.094 × 6 = 18.564.

Accept equivalent decimal forms with trailing zeros, such as 0.760 for 0.76. Estimates may vary if they are reasonable and show compatible-number thinking.