LESSON MAKER PRO

Tiny Piece Division

Find how many unit-fraction pieces fit in a whole number.

GRADE 5 · 5.NF.B.7b

CCSS.Math.Content.5.NF.B.7b "Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient..."

NAME _____ DATE _____

HOW MANY TINY PIECES?

Dividing a whole number by a unit fraction asks how many pieces of that size fit in the whole number. Multiply the whole number by the denominator to find the quotient. You can check by multiplying your quotient by the unit fraction.

WORKED EXAMPLE

11 ÷ 1/9

1. 11 ÷ 1/9 asks, "How many 1/9 pieces are in 11 wholes?"
2. Visual model: One whole is |1/9|1/9|1/9|1/9|1/9|1/9|1/9|1/9|1/9|. There are 11 such wholes.
3. 11 wholes have 11 x 9 = 99 pieces of size 1/9.
4. Check: 99 x 1/9 = 11.

Answer: 99

PRACTICE 6 problems

1 5 ÷ 1/2 = ___

ANSWER _____

2 7 ÷ 1/4 = ___

ANSWER _____

3 13 ÷ 1/6 = ___

ANSWER _____

4 2 ÷ 1/10 = ___

ANSWER _____

5 6 ÷ 1/12 = ___

ANSWER _____

6 8 ÷ 1/5 = ___

ANSWER _____

APPLY IT Show your work

1 The art club has 12 yards of ribbon. Each badge needs 1/3 yard of ribbon. How many badges can the club make?

WORK SPACE

ANSWER _____

2 A video creator has 16 minutes of footage. Each highlight clip is 1/8 minute long. How many highlight clips can the creator make?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Mia says that 6 ÷ 1/4 = 1 1/2 because division always makes a number smaller. Explain Mia's error, then write a multiplication equation that proves the correct quotient.

_____

_____

ANSWER KEY

Tiny Piece Division

GRADE 5 · 5.NF.B.7b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	5 ÷ 1/2 = ___	**10**
2	7 ÷ 1/4 = ___	**28**
3	13 ÷ 1/6 = ___	**78**
4	2 ÷ 1/10 = ___	**20**
5	6 ÷ 1/12 = ___	**72**
6	8 ÷ 1/5 = ___	**40**

PART 2 · APPLY IT

1. **36 badges** Compute 12 ÷ 1/3. Since each yard has 3 thirds, 12 x 3 = 36.
2. **128 highlight clips** Compute 16 ÷ 1/8. Since each minute has 8 eighths, 16 x 8 = 128.

CHALLENGE

Mia is incorrect because dividing by 1/4 asks how many fourths are in 6. The quotient is 24 because 24 x 1/4 = 6.

Accept equivalent wording that explains division by a unit fraction as counting equal fractional pieces. For the challenge, accept a correct explanation and the equation 24 x 1/4 = 6.