

Divide It Apart

Use arrays, place value, and multiplication to divide.

GRADE 5 • NY-5.NBT.6

NY-5.NBT.6 "Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division..."

NAME _____

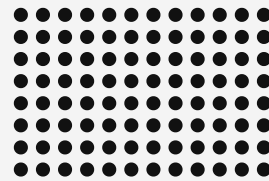
DATE _____

BREAK APART DIVISION

Use multiplication to check a division answer. An array can show equal rows, and each row tells the quotient when you divide the total by the number of rows.

WORKED EXAMPLE

The array shows dots in 8 equal rows. Find the total number of dots divided by 8.

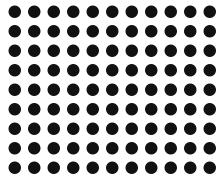


1. Count 12 dots in each row.
2. $8 \times 12 = 96$, so there are 96 dots.
3. $96 \div 8 = 12$.

Answer: 12

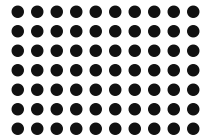
PRACTICE 6 problems

- 1** The array shows dots in 9 equal rows. Find the total number of dots divided by 9.



ANSWER _____

- 2** The array shows dots in 7 equal rows. Find the total number of dots divided by 7.



ANSWER _____

- 3** Find $624 \div 24$. Use multiplication to check your quotient.

ANSWER _____

- 4** Find $936 \div 18$.

ANSWER _____

- 5** Find $1,248 \div 32$.

ANSWER _____

- 6** Find $3,312 \div 46$.

ANSWER _____

APPLY IT Show your work

- 1** A makers club has 1,081 beads. The club puts the same number of beads into 23 craft kits. Use the area model to help find how many beads go in each kit.

	20	3
40	800	120
7	140	21

ANSWER _____

- 2** The school store orders 2,184 pencils. The pencils are packed equally into 28 boxes. How many pencils are in each box?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find $3,864 \div 42$. Explain your reasoning with two multiplication equations that show how you broke apart the quotient.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	The array shows dots in 9 equal rows. Find the total number of dots divided by 9.	11
2	The array shows dots in 7 equal rows. Find the total number of dots divided by 7.	10
3	Find $624 \div 24$. Use multiplication to check your quotient.	26; $24 \times 26 = 624$
4	Find $936 \div 18$.	52
5	Find $1,248 \div 32$.	39
6	Find $3,312 \div 46$.	72

PART 2 • APPLY IT

- 47 beads per kit** The model shows 47×23 . Since $47 \times 23 = 1,081$, each craft kit gets 47 beads.
- 78 pencils per box** Multiply to check: $28 \times 78 = 2,184$. Therefore, each box has 78 pencils.

CHALLENGE

92; $42 \times 90 = 3,780$ and $42 \times 2 = 84$. Since $3,780 + 84 = 3,864$, $3,864 \div 42 = 92$.

Accept equivalent multiplication checks and place-value break-apart strategies. For the challenge, accept any correct equations that show 42 multiplied by parts totaling 92.