

Quotient Quest

Divide large numbers using place value and multiplication.

GRADE 4 • 4.NBT.B.6

CCSS.Math.Content.4.NBT.B.6 "Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division..."

NAME _____

DATE _____

BREAK APART TO DIVIDE

Break the dividend into parts that are easy to divide by the divisor. Add the partial quotients, then check by multiplying the quotient by the divisor and adding any remainder.

WORKED EXAMPLE

Find $936 \div 4$.

1. Break 936 into $800 + 120 + 16$.
2. $800 \div 4 = 200$, $120 \div 4 = 30$, and $16 \div 4 = 4$.
3. Add the partial quotients: $200 + 30 + 4 = 234$.
4. Check: $4 \times 234 = 936$.

Answer: 234

PRACTICE 6 problems

1 $864 \div 3 = ?$

ANSWER _____

2 $975 \div 4 = ?$

ANSWER _____

3 $1,428 \div 7 = ?$

ANSWER _____

4 $2,563 \div 5 = ?$

ANSWER _____

5 $3,276 \div 6 = ?$

ANSWER _____

6 $1,999 \div 8 = ?$

ANSWER _____

APPLY IT Show your work

- 1** The art club has 1,734 stickers. They put the same number of stickers into 6 prize packs. How many stickers go in each pack?

WORK SPACE

ANSWER _____

- 2** A gaming club has 2,458 tokens to share equally among 7 teams. How many tokens does each team get, and how many are left over?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Use an equation and a place-value strategy to find $3,864 \div 9$. Explain how you can check your answer.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$864 \div 3 = ?$	288
2	$975 \div 4 = ?$	243 R3
3	$1,428 \div 7 = ?$	204
4	$2,563 \div 5 = ?$	512 R3
5	$3,276 \div 6 = ?$	546
6	$1,999 \div 8 = ?$	249 R7

PART 2 • APPLY IT

- 289 stickers in each pack** Divide 1,734 by 6. Since $6 \times 289 = 1,734$, each prize pack has 289 stickers.
- 351 tokens per team, 1 token left over** Divide 2,458 by 7. Since $7 \times 351 = 2,457$, each team gets 351 tokens and 1 token remains.

CHALLENGE

429 R3; $3,864 = 9 \times 429 + 3$. One strategy is $9 \times 400 = 3,600$, leaving 264, then $9 \times 29 = 261$, leaving 3.

Accept quotient and remainder forms such as 243 R3 or 243 remainder 3. Students may use partial quotients, an area model, or another correct place-value strategy.