

G4 Playlist: Dividing Whole Numbers

Aligns with *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. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Related Standards

- *CCSS.MATH.CONTENT.3.OA.A.2*: Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.*
- *CCSS.MATH.CONTENT.3.NBT.A.3*: Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.
- *CCSS.MATH.CONTENT.5.NBT.B.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. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.



Objectives

In this module, you will learn and practice the following skills:

- Use properties of operations and place value to divide multi-digit numbers by 1-digit numbers.
- Understand remainders.

Let's get started!

Key Terms

- A **dividend** is a number that is divided by another number.
- A **divisor** is a number that divides another number into equal groups.
- A **quotient** is the result of division.
- A **remainder** is the amount left over when a dividend is not evenly divided by a divisor.
- A **partial quotient** is the quotient of a part of the dividend and the divisor.

PREVIEW



Dividing Whole Numbers

(4.NBT.B.6)

Use place value, related multiplication facts, and **partial quotients** to find the **quotient** of a three- or four-digit **dividend** and a 1-digit **divisor**.

Use place value:

What is $1,500 \div 5$?

Think: $1,500 = 15$ hundreds

$$3 \times 5 = 15, \text{ so } 15 \div 5 = 3$$

$$15 \text{ hundreds} \div 5 = 3 \text{ hundreds}$$

$$1,500 \div 5 = 300$$

Use partial quotients:

What is $432 \div 8$?

$$432 = 400 + 32$$

$$= 40 \text{ tens} + 32 \text{ ones}$$

$$432 \div 8 = (40 \text{ tens} \div 8) + (32 \text{ ones} \div 8)$$

$$\text{Think: } 5 \times 8 = 40 \quad 4 \times 8 = 32$$

$$432 \div 8 = 5 \text{ tens} + 4 \text{ ones}$$

$$432 \div 8 = 54$$

Record the division vertically.

$\begin{array}{r} 50 + 4 = 54 \\ 8 \overline{) 432} \\ \underline{-400} \\ 32 \\ \underline{-32} \\ 0 \end{array}$	$8 \times 50 = 400$ $8 \times 4 = 32$
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