

# Dividing by Two-Digit Divisors

Grade 5 Math • Section 2.3

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 17

## Quick Review and Helpful Hints

**Strategy:** Estimate the quotient first using compatible numbers. Then use the standard long-division algorithm.

To estimate  $2,856 \div 34$ , think  $2,800 \div 35 = 80$ , so the answer is near 80.

Always multiply back to check:  $\text{quotient} \times \text{divisor} + \text{remainder} = \text{dividend}$ .

**Example:** Find  $1,974 \div 42$ .

Estimate:  $2,000 \div 40 = 50$ , so the answer is near 47. 42 goes into 197 four times ( $42 \times 4 = 168$ ). Subtract:  $197 - 168 = 29$ . Bring down 4: 294.  $42 \times 7 = 294$  exactly. Answer: 47.

**Answer:** 47

## Practice Problems

Divide. Write the quotient and any remainder.

- |                            |                             |                             |
|----------------------------|-----------------------------|-----------------------------|
| 1. $858 \div 22 =$ _____   | 6. $4,368 \div 72 =$ _____  | 11. $7,488 \div 81 =$ _____ |
| 2. $1,440 \div 32 =$ _____ | 7. $2,730 \div 35 =$ _____  | 12. $2,484 \div 36 =$ _____ |
| 3. $2,576 \div 46 =$ _____ | 8. $5,016 \div 66 =$ _____  | 13. $4,032 \div 63 =$ _____ |
| 4. $3,024 \div 54 =$ _____ | 9. $1,904 \div 28 =$ _____  | 14. $6,375 \div 25 =$ _____ |
| 5. $1,125 \div 15 =$ _____ | 10. $3,510 \div 45 =$ _____ | 15. $3,192 \div 42 =$ _____ |

## Word Problems

16. A factory packs 3,744 bottles into cases of 24. How many full cases can they fill? \_\_\_\_\_
17. A bus company needs to transport 1,890 students. Each bus holds 45 students. How many buses are needed? \_\_\_\_\_



## Answer Keys

- |            |             |
|------------|-------------|
| 1. 39      | 10. 78      |
| 2. 45      | 11. 92 R 36 |
| 3. 56      | 12. 69      |
| 4. 56      | 13. 64      |
| 5. 75      | 14. 255     |
| 6. 60 R 48 | 15. 76      |
| 7. 78      | 16. 156     |
| 8. 76      | 17. 42      |
| 9. 68      |             |

### Step-by-Step Explanations

- Start with the main idea. For dividing by two-digit divisors, divide 858 by 22.  $858 \div 22 = 39$ . Check division by multiplying the quotient back by the divisor.
- Keep the work tidy. For dividing by two-digit divisors, divide 1,440 by 32.  $1,440 \div 32 = 45$ . A remainder means there was not enough left for one more full group.
- Look at what the numbers mean. For dividing by two-digit divisors, divide 2,576 by 46.  $2,576 \div 46 = 56$ . Use estimation to choose a quotient that is close before you divide exactly.
- Use the setup first. For dividing by two-digit divisors, divide 3,024 by 54.  $3,024 \div 54 = 56$ . Check division by multiplying the quotient back by the divisor.
- Check the size of the answer. For dividing by two-digit divisors, divide 1,125 by 15.  $1,125 \div 15 = 75$ . A remainder means there was not enough left for one more full group.
- Match the operation to the words. For dividing by two-digit divisors, divide 4,368 by 72.  $4,368 \div 72 = 60$  remainder 48. Use estimation to choose a quotient that is close before you divide exactly.
- Write the important values first. For dividing by two-digit divisors, divide 2,730 by 35.  $2,730 \div 35 = 78$ . Check division by multiplying the quotient back by the divisor.
- Follow the pattern carefully. For dividing by two-digit divisors, divide 5,016 by 66.  $5,016 \div 66 = 76$ . A remainder means there was not enough left for one more full group.
- Start with the main idea. For dividing by two-digit divisors, divide 1,904 by 28.  $1,904 \div 28 = 68$ . Use estimation to choose a quotient that is close before you divide exactly.
- Keep the work tidy. For dividing by two-digit divisors, divide 3,510 by 45.  $3,510 \div 45 = 78$ . Check division by multiplying the quotient back by the divisor.
- Look at what the numbers mean. For dividing by two-digit divisors, divide 7,488 by 81.  $7,488 \div 81 = 92$  remainder 36. A remainder means there was not enough left for one more full group.
- Use the setup first. For dividing by two-digit divisors, divide 2,484 by 36.  $2,484 \div 36 = 69$ . Use estimation to choose a quotient that is close before you divide exactly.
- Check the size of the answer. For dividing by two-digit divisors, divide 4,032 by 63.  $4,032 \div 63 = 64$ . Check division by multiplying the quotient back by the divisor.
- Match the operation to the words. For dividing by two-digit divisors, divide 6,375 by 25.  $6,375 \div 25 = 255$ . A remainder means there was not enough left for one more full group.
- Write the important values first. For dividing by two-digit divisors, divide 3,192 by 42.  $3,192 \div 42 = 76$ . Use estimation to choose a quotient that is close before you divide exactly.
- Follow the pattern carefully. For dividing by two-digit divisors,  $3,744 \div 24 = 156$ , so they can fill 156 full cases. Check division by multiplying the quotient back by the divisor.
- Start with the main idea. For dividing by two-digit divisors,  $1,890 \div 45 = 42$ , so 42 buses are needed. A remainder means there was not enough left for one more full group.



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