Dividing 2-Digit by 1-Digit Numbers

Grade 4 · Division unit, lesson 3 of 8 · Free lesson

In this pack: page 1 teacher guide · page 2 task cards (cut apart) · page 3 practice · page 4 answer key.

Common Core Standard: 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.

OVERVIEW

This is the lesson where division grows up: the answers no longer sit inside one multiplication fact, so pupils need a method, and the method here is place value itself. The dividend splits into chunks the divisor divides exactly, each chunk divides like a fact, and the parts add to the quotient. The area model matters because it makes the split visible: length is the dividend, width is the divisor, the top edge is the answer in pieces. Expect two predictable stalls, both about the split rather than the dividing: pupils who split digit by digit (96 as 9 and 6), and pupils whose first split will not divide and who stop instead of re-splitting. Both have their own myth-busting slide, and both dissolve once re-splitting is treated as normal.

MATERIALS

- Base-ten blocks or place value counters for pupils who still need to break a ten by hand
- Printed area model cards (page 2 of this worksheet) and scissors for each pair
- The practice page (page 3) and pencils. Squared paper helps pupils draw their own area models in Part B

DIRECTIONS

1. Teach the lesson slides first, drawing each area model live so the class watches the split happen before it is named.
2. Hand out the area model cards. Pairs read each model, write the two chunk divisions, and finish the quotient.
3. Set the practice page. In Part B, pupils must write their chosen split next to each division, not just the answer.
4. Mark together from the answer key on page 4, then give the exit ticket from the final slides.

EVIDENCE OF LEARNING

Success looks like this: the pupil splits a new dividend into dividing chunks without prompting, re-splits without fuss when the first choice stalls, and checks the quotient by multiplying it back.

© MathClearGuide.com · Free lesson resource

Task Cards: Cut Apart and Solve

Cut along the dashed lines. Each card shows one division as an area model. Read the chunks off the model, then write the working on the back.

Card 1



Read the area model. Write the two chunk divisions and the answer.

_____ **Answer:** _____

Card 2



Read the area model. Write the two chunk divisions and the answer.

_____ **Answer:** _____

Card 3



Read the area model. Write the two chunk divisions and the answer.

_____ **Answer:** _____

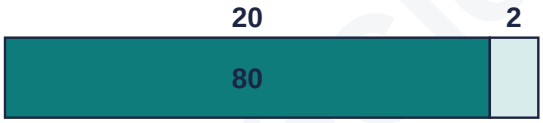
Card 4



Read the area model. Write the two chunk divisions and the answer.

_____ **Answer:** _____

Card 5



Read the area model. Write the two chunk divisions and the answer.

_____ **Answer:** _____

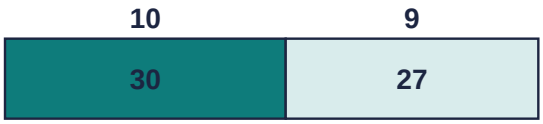
Card 6



Read the area model. Write the two chunk divisions and the answer.

_____ **Answer:** _____

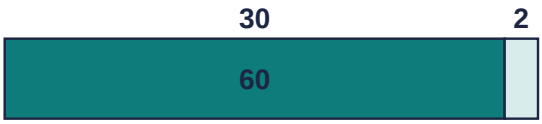
Card 7



Read the area model. Write the two chunk divisions and the answer.

_____ **Answer:** _____

Card 8



Read the area model. Write the two chunk divisions and the answer.

_____ **Answer:** _____

MathClearGuide.com

Dividing 2-Digit by 1-Digit Numbers

Name: _____ Date: _____ Class: _____

Part A - Split and Divide

The split is given. Divide each chunk, then add the parts.

1. 96 ÷ 4 96 = 80 + 16

   80 ÷ 4 = _____ 16 ÷ 4 = _____ 96 ÷ 4 = _____

2. 84 ÷ 3 84 = 60 + 24

   60 ÷ 3 = _____ 24 ÷ 3 = _____ 84 ÷ 3 = _____

3. 75 ÷ 5 75 = 50 + 25

   50 ÷ 5 = _____ 25 ÷ 5 = _____ 75 ÷ 5 = _____

Part B - Choose the Split

No split is given. Write the split you choose, then divide.

1. 68 ÷ 4 = _____ my split: _____ + _____

2. 78 ÷ 3 = _____ my split: _____ + _____

Part C - Story Problems

Split, divide, add, check. Use the sentence frame below.

1. A rope 95 cm long is cut into 5 equal pieces. How long is each piece?

_____

_____

Answer: _____ cm

2. 84 counters are shared equally among 6 tables. How many counters are on each table?

_____

Answer: _____ counters

Say it like a mathematician:
I split _____ into _____ + _____. Then _____ ÷ _____ = _____ and _____ ÷ _____ = _____, so the answer is _____.

MathClearGuide.com

Answer Key - Dividing 2-Digit by 1-Digit Numbers

Area Model Cards

1. 80 ÷ 4 = 20 and 16 ÷ 4 = 4, so 96 ÷ 4 = 24.
2. 60 ÷ 3 = 20 and 24 ÷ 3 = 8, so 84 ÷ 3 = 28.
3. 50 ÷ 5 = 10 and 25 ÷ 5 = 5, so 75 ÷ 5 = 15.
4. 60 ÷ 6 = 10 and 36 ÷ 6 = 6, so 96 ÷ 6 = 16.
5. 80 ÷ 4 = 20 and 8 ÷ 4 = 2, so 88 ÷ 4 = 22.
6. 70 ÷ 7 = 10 and 21 ÷ 7 = 3, so 91 ÷ 7 = 13.
7. 30 ÷ 3 = 10 and 27 ÷ 3 = 9, so 57 ÷ 3 = 19.
8. 60 ÷ 2 = 30 and 4 ÷ 2 = 2, so 64 ÷ 2 = 32.

Part A - Split and Divide

1. 20 and 4, so 96 ÷ 4 = 24.
2. 20 and 8, so 84 ÷ 3 = 28.
3. 10 and 5, so 75 ÷ 5 = 15.

Part B - Choose the Split

1. 17 (one good split: 40 + 28, giving 10 + 7).
2. 26 (one good split: 60 + 18, giving 20 + 6). Accept any split whose chunks divide by the divisor and

Part C - Story Problems

1. 19 cm (95 = 50 + 45, so 10 + 9 = 19).
2. 14 counters (84 = 60 + 24, so 10 + 4 = 14).

MathClearGuide.com