Answers and talk notes

Divide Multi-Digit Numbers Using an Algorithm

What your student is learning

Tonight we divide big numbers by taking away easy chunks, then adding up how many we took out.

Answers

Ask your student to explain before you look.

1. **A.** 21. 4 × 20 = 80 and 4 × 1 = 4, so 84 ÷ 4 = 21.
2. **B.** 12. The divisor is the number you divide by, so the divisor is 12.
3. **C.** 72. 6 × 70 = 420 and 6 × 2 = 12, so 432 ÷ 6 = 72.
4. **D.** 42. 18 × 40 = 720 and 18 × 2 = 36, so 756 ÷ 18 = 42.
5. **B.** 98. 25 × 100 = 2,500 is 50 too much, and 50 is 2 groups of 25, so 100 − 2 = 98.
6. **C.** 14 R 2. 7 × 14 = 98 and 100 − 98 = 2, so 100 ÷ 7 is 14 R 2.

Talk about it

Which number is the dividend and which is the divisor? How can you check the quotient?

Home mission

Pretend you have 1,344 stickers to put in packs of 12. Can your student take out 12 × 100 first and say how many stickers are left?

When they are stuck, ask

- What is a big, easy chunk of the divisor we can take out first?
- How much is left now? Can we take out another chunk?
- Let's add up all our chunks. Then multiply back to check.

Try not to say

- Stop dividing as soon as you take out the first chunk.
- It does not matter if a number is left over.
- Just guess; you do not need to check by multiplying.