Multiples of 10, 100 and 1,000

1 Mo is multiplying numbers by 20

> To multiply by 20, I multiply first by 2 and then by 10

a) Use Mo's method to complete the multiplication sentences.

$7 \times 20 =$ 140

$12 \times 20 =$ 240

$20 \times 134 =$ 2680

b) Would you get the same answer if you multiplied by 10 first and then by 2? ___Yes___

Write an example.

$7 \times 2 \times 10 = 14 \times 10 = 140$

$7 \times 10 \times 2 = 70 \times 2 = 140$

2 Complete the sentences.

a) To multiply by 50, you multiply by 5 first and then by 10

b) To multiply by 200, you multiply by 2 first and then by 100

c) To multiply by 7,000 you multiply by 7 first and then by 1,000

3 Complete the multiplication sentences.

Show all the steps in your thinking.

a) $7 \times 500 =$ 3,500

b) $6,000 \times 8 =$ 48,000

c) $300 \times 90 =$ 27,000

d) $500 \times 300 =$ 150,000

4 Complete the calculations.

a) $300 \times$ 30 $= 9,000$ **d)** 300 $\times 90 = 27,000$

b) $6,000 \times$ 3 $= 18,000$ **e)** $500 \times 60 =$ 30,000

c) $700 \times$ 40 $= 28,000$ **f)** $8,000 \times$ 90 $= 720,000$

5

$$42 \times 3 = 126$$

Use this fact to solve the calculations.

a) $42 \times 30 =$ 1,260   **c)** $300 \times 42 =$ 12,600

b) $420 \times 3 =$ 1,260   **d)** $42 \times 3,000 =$ 126,000

6 Here are two methods to solve 16 × 50

Method 1	Method 2
16 × 10 × 5	16 × 5 × 10
= 160 × 5	= 80 × 10
= 800	= 800

a) What is the same about the methods?

What is different?

b) What other method could you use to multiply by 50?

Show your method.

e.g. 16 × 100 ÷ 2 = 1,600 ÷ 2 = 800

_____

_____

c) Share your method with a partner.

7 Jack and Mo are calculating 3,500 ÷ 70

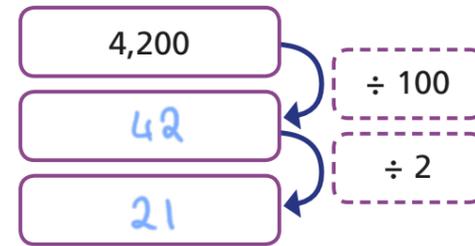| Jack's workings	Mo's workings
3,500 ÷ 10 = 350	3,500 ÷ 10 = 350
350 × 7 = 2,450	350 ÷ 7 = 50

a) Whose workings are correct? __Mo__

b) What mistake has the other person made?

8 Complete the division diagrams.

a) 4,200 ÷ 200

| 4,200 |
| 42 | ÷ 100 |
| 21 | ÷ 2 |

b) 36,000 ÷ 6,000

| 36,000 |
| 36 | ÷1,000 |
| 6 | ÷ 6 |
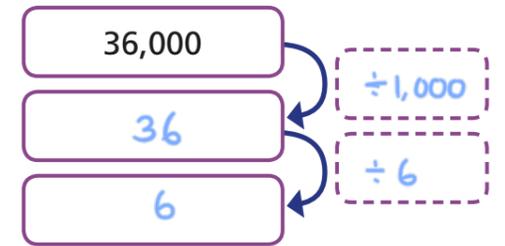
Complete the division sentences.

c) 3,200 ÷ 80 = 40

3,200 ÷ 800 = 4

d) 72,000 ÷ 9,000 = 8

72,000 ÷ 900 = 80

72,000 ÷ 90 = 800

9 Match the calculations to the answers.

One has been done for you.

8 × 40		3,200
3,200 ÷ 80		320
4 × 800		40
32,000 ÷ 40		800
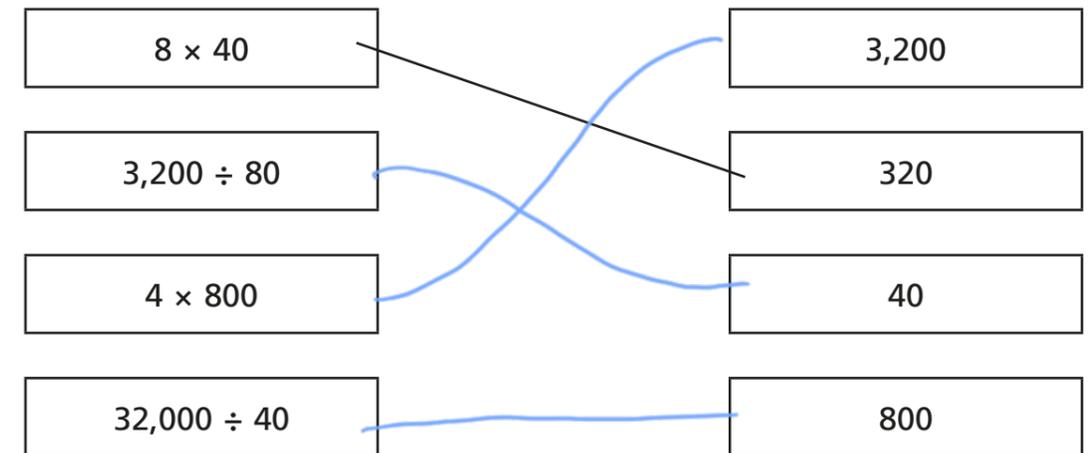
10 The answer is 400

What could the question be?

Write 4 division and 4 multiplication questions.

Ask a partner to check your questions.