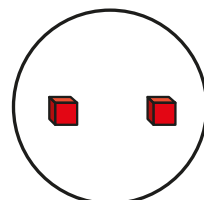
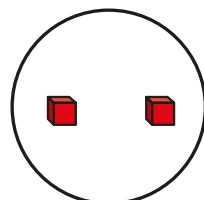
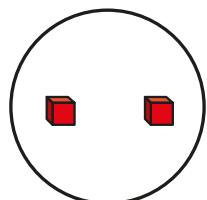


Related calculations



1 Complete the number sentences.

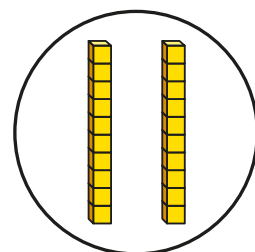
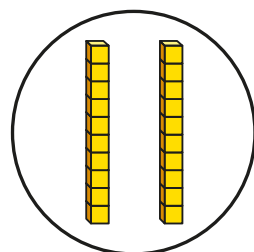
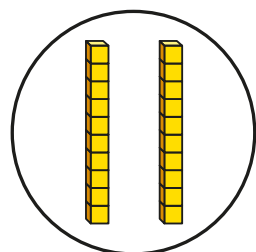
a)



$$3 \times 2 \text{ ones} = \boxed{6} \text{ ones}$$

$$3 \times 2 = \boxed{6}$$

b)



$$3 \times 2 \text{ tens} = \boxed{6} \text{ tens}$$

$$3 \times 20 = \boxed{60}$$

2 Use base 10 to represent the multiplications.

Complete the number sentences.

a) $2 \times 4 = \boxed{8}$

$$2 \times 40 = \boxed{80}$$

b) $5 \times 3 = \boxed{15}$

$$5 \times 30 = \boxed{150}$$

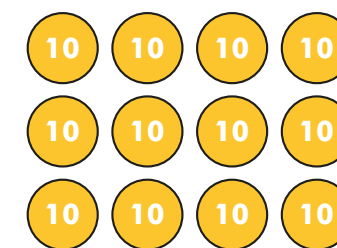
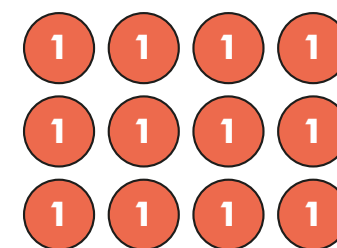
c) $5 \times 2 = \boxed{10}$

$$5 \times 20 = \boxed{100}$$

d) $2 \times 8 = \boxed{16}$

$$80 \times 2 = \boxed{160}$$

3 Nijah makes these arrays.



Complete the number sentences.

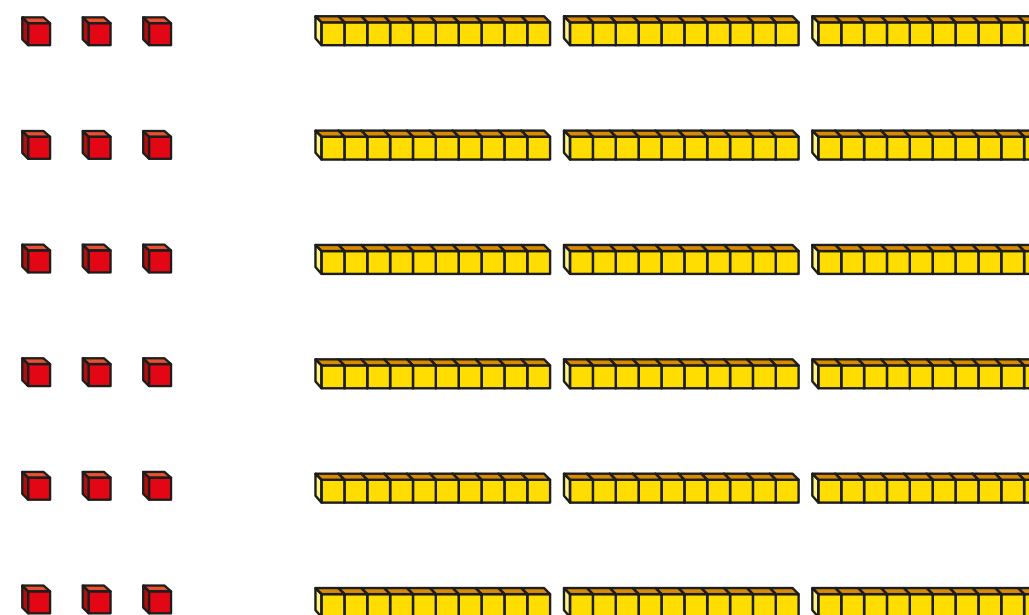
$$4 \times 3 = \boxed{12}$$

$$4 \times 30 = \boxed{120}$$

What is the same about the arrays? What is different?

4 Scott uses base 10 to make two related calculations.

Use the base 10 to complete Scott's calculations.

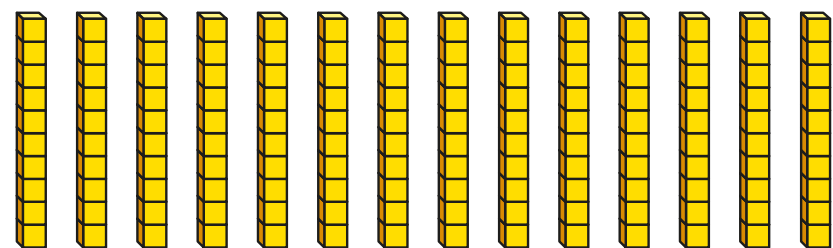


$$6 \times 3 = \boxed{18}$$

$$6 \times 30 = \boxed{180}$$

How does the answer to the first calculation help you work out the second calculation?

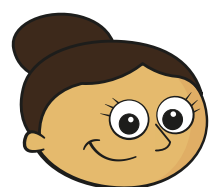
- 5 Use these pieces of base 10 to complete the divisions.



$$14 \div 2 = \boxed{7}$$

$$140 \div 2 = \boxed{70}$$

6



I know
 $5 \times 7 = 35$

Use Dora's fact to complete the calculations.

$$\text{a) } 5 \times 70 = \boxed{350}$$

$$\text{d) } 35 \div 5 = \boxed{7}$$

$$\text{b) } 7 \times 5 = \boxed{35}$$

$$\text{e) } 350 \div 5 = \boxed{70}$$

$$\text{c) } 50 \times 7 = \boxed{350}$$

$$\text{f) } 350 \div 7 = \boxed{50}$$

7

Mr Jones buys 12 large jugs.

The total cost of the jugs is £240

How much does each jug cost?

Each jug costs $\boxed{£20}$

How did you work this out?



- 8 Complete the number sentences.

$$\text{a) } 3 \times \boxed{70} = 210$$

$$\text{c) } 4 \times 90 = \boxed{360}$$

$$\text{b) } 240 \div 6 = \boxed{40}$$

$$\text{d) } 120 \div \boxed{60} = 2$$

9

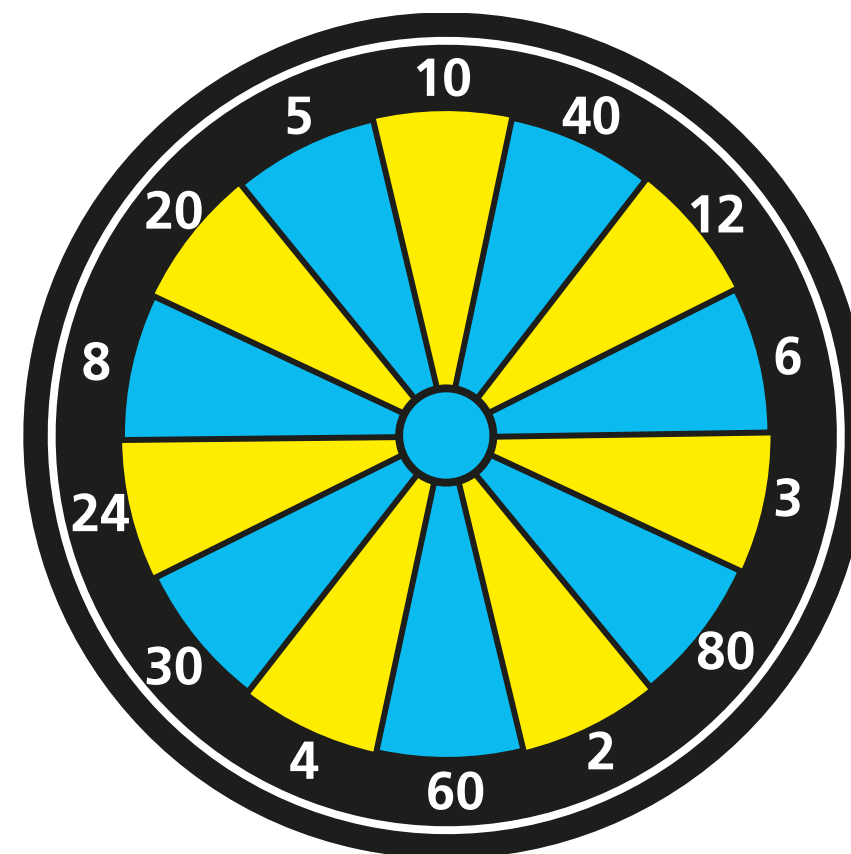
Huan throws two darts at the dartboard.

He multiplies the numbers he hits together.

Huan's score is 240

What two numbers could the darts have landed in?

E.g. $\boxed{40}$ and $\boxed{6}$



How many different answers can you find?



Multiply 2-digits by 1-digit (2)

- 1 There are 23 marbles in a jar.
There are 5 jars.



Tens	Ones

How many marbles are there in total?

$$5 \times 3 \text{ ones} = 15$$

$$5 \times 2 \text{ tens} = 100$$

$$15 + 100 = 115$$

$$5 \times 23 = 115$$

There are 115 marbles in total.

- 2 Work out 4×15

Tens	Ones

$$4 \times 5 = 20$$

$$4 \times 10 = 40$$

$$4 \times 15 = 60$$

- 3 Complete the multiplications.

$$\text{a) } 4 \times 24 = 96$$

$$\text{b) } 3 \times 17 = 51$$

$$\text{c) } 3 \times 25 = 75$$

$$\text{d) } 34 \times 4 = 136$$

- 4 Complete the column multiplications.

Tens	Ones

		T	O	
		2	4	
	x		3	
		7	2	
		1		

Tens	Ones
10 10 10	1 1 1 1 1
10 10 10	1 1 1 1 1
10 10 10	1 1 1 1 1
10 10 10	1 1 1 1 1

			T	O	
			3	5	
				4	
	x				
			1	4	0
				2	



5 Work out the multiplications.

a) 25×5

			T	O	
			2	5	
				5	
	x				
			1	2	5
				2	

c) 5×26

			T	O	
			2	6	
				5	
	x				
			1	3	0
				3	

b) 35×6

			T	O	
			3	5	
				6	
	x				
			2	1	0
				3	

d) 4×36

			T	O	
			3	6	
				4	
	x				
			1	4	4
				2	

6 Tommy works out 37×2

			T	O	
			3	7	
				2	
	x				
			6	1	4

			T	O	
			3	7	
				2	
	x				
			7	4	
				1	

What mistake has Tommy made? Work out the correct answer.

7 Find the missing numbers.

			2	2	
				4	
	x				
			8	8	

			3	1	
				4	
	x				
			1	2	4

8 Here are some digit cards. 1 2 3 4 5 8

a) Use the digit cards to create a multiplication and work out the answer.

E.g. $\boxed{3} \boxed{2} \times \boxed{5} = \boxed{160}$

b) Work with a partner to find calculations that have:

- an odd product
- an even product
- an exchange in the ones column
- an exchange in the ones and tens columns.



Multiply 2-digits by 1-digit (1)



- 1 Ron, Eva and Mo each have 23 marbles.

Tens	Ones

How many marbles are there in total?

$$3 \times 3 \text{ ones} = \boxed{9}$$

$$3 \times 2 \text{ tens} = \boxed{60}$$

$$\boxed{9} + \boxed{60} = \boxed{69}$$

$$3 \times 23 = \boxed{69}$$

There are $\boxed{69}$ marbles in total.

- 2 Use the place value chart to work out 2×24
Complete the multiplication sentences.

Tens	Ones

$$2 \times 4 = \boxed{8}$$

$$2 \times 20 = \boxed{40}$$

$$2 \times 24 = \boxed{48}$$

- 3 Annie works out $43 \times 2 = 86$

Tens	Ones

		T	O	
		4	3	
	x		2	
		8	6	

Talk about Annie's methods with a partner.

What is the same? What is different?

- 4 Complete the multiplications.

a)

		T	O	
		2	4	
	x		2	
		4	8	

b)

		T	O	
		4	4	
	x		2	
		8	8	

c) 31×3

		T	O	
		3	1	
	x		3	
		9	3	

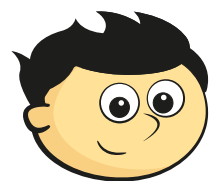
d) 42×2

		T	O	
		4	2	
	x		2	
		8	4	

Compare answers with a partner.



- 5 Jack is trying to work out 34×2 using the column method.



I'm not sure what to do.

			2	
	x	3	4	

Show how Jack could improve his column method and work out the answer.

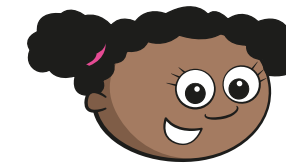
		3	4	
	x		2	
		6	8	

- 6 One toaster costs £32
How much do 3 toasters cost?



£96

- 7 Whitney has multiplied a 2-digit number by a 1-digit number.



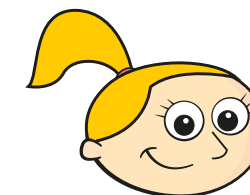
I had to do $30 + 9 = 39$ to get my answer.

What numbers is Whitney multiplying?

Fill in the missing digits.

		1	3	
	x		3	
		3	9	

- 8 Filip used the column method to work out 41×2



I can work this multiplication out in my head.

		4	1	
	x		2	

- a) How do you think Eva will work this out in her head?
b) Tick the multiplications that you can work out in your head. *Various answers.*

4×22

3×23

3×33

12×4

3×32

4×20

