Introducing multiplication – groups of 5
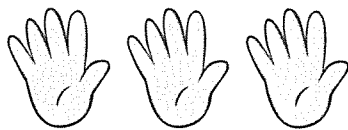
Use repeated addition to find the total number of fingers.
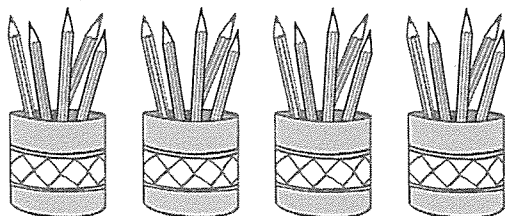
 $5 + 5 + 5 = 15$

3 groups of 5 is equal to 15.

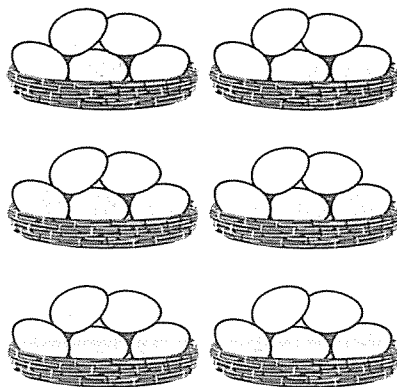**1** Find the total of each group by using repeated addition.

a How many pencils?

$\square + \square + \square + \square = \square$

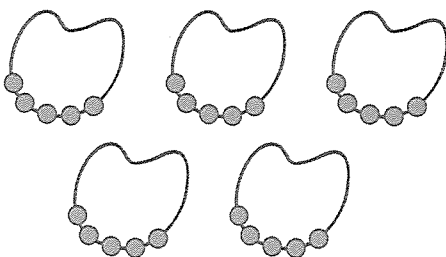$\square$ groups of $\square$ is equal to $\square$

b How many eggs?

$\square + \square + \square + \square + \square + \square = \square$

$\square$ groups of $\square$ is equal to $\square$

c How many beads?

$\square + \square + \square + \square + \square = \square$

$\square$ groups of $\square$ is equal to $\square$
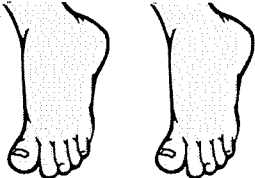
Introducing multiplication – groups of 5

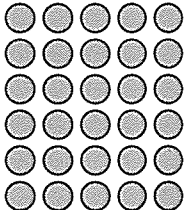> This is a multiplication symbol ✕ and it means 'groups of'.
>
> So instead of repeated addition, we can use a multiplication symbol.
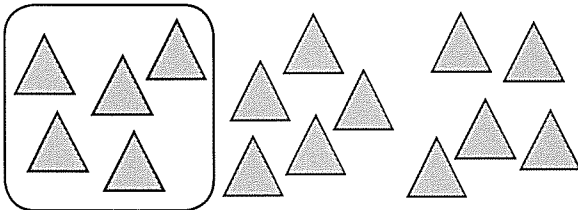>
> $$5 + 5 + 5 + 5 + 5 = 25 \qquad\qquad 5 \times 5 = 25$$
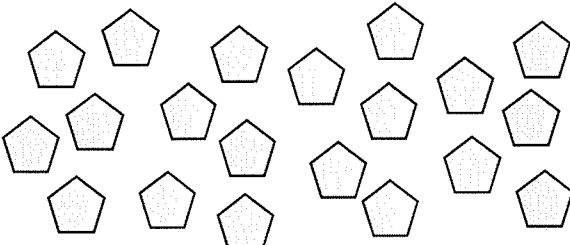
2 **Find the total of each group by using repeated addition:**

a ☐ groups of ☐ is equal to ☐

☐ ✕ ☐ = ☐

b ☐ rows of ☐ is equal to ☐

☐ ✕ ☐ = ☐

3 **Ring the shapes in groups of 5. One group is ringed for you. Then complete the multiplication fact.**

a ☐ groups of ☐ is equal to ☐

☐ ✕ 5 = ☐

b ☐ groups of ☐ is equal to ☐

☐ ✕ 5 = ☐

Multiplication and Division

Copyright © 3P Learning

Introducing multiplication – 5 times table

Here is a skip counting pattern on a hundred grid. It shows a counting pattern of 5.

| 1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1 Finish each pattern by counting in 5s:

a +5 +5 +5

20   25   ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
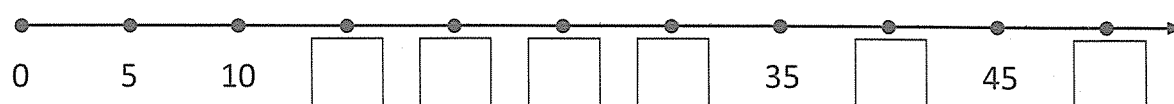
b +5 +5 +5

45   50   ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
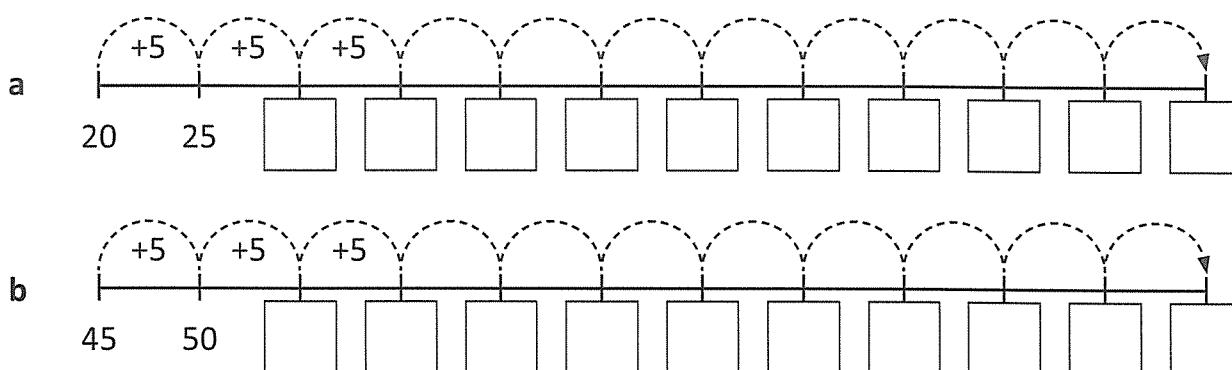
2 Show × 5 multiplication facts on each number line.

a Finish labelling this number line and then show 5 jumps starting from 0:

0   5   ☐   ☐   20   ☐   30   ☐   40   ☐   ☐
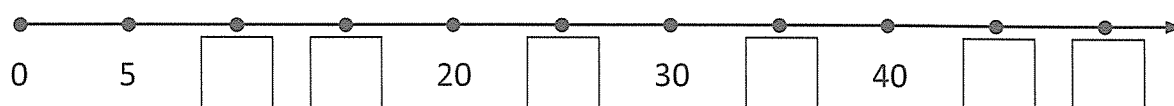
This is the same as ☐ × 5 = ☐

b Finish labelling this number line and then show 7 jumps starting from 0:

0   5   10   ☐   ☐   ☐   ☐   35   ☐   45   ☐

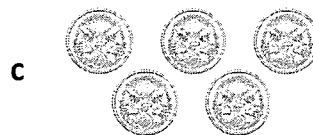This is the same as ☐ × 5 = ☐

Introducing multiplication – 5 times table

3 Write a 5 times table fact for each set of 5 cent coins. The first one has been done for you.

a

$\boxed{4} \times \boxed{5¢} = \boxed{20¢}$

b

$\boxed{} \times \boxed{} = \boxed{}$

c

$\boxed{} \times \boxed{} = \boxed{}$

4 Times tables are a set of multiplication facts from 1 to 10 based on multiplying by the same number each time. Write the answers for the 5 times table.

$1 \times 5 = \boxed{}$

$2 \times 5 = \boxed{}$

$3 \times 5 = \boxed{}$

$4 \times 5 = \boxed{}$

$5 \times 5 = \boxed{}$

$6 \times 5 = \boxed{}$

$7 \times 5 = \boxed{}$

$8 \times 5 = \boxed{}$

$9 \times 5 = \boxed{}$

$10 \times 5 = \boxed{}$

5 Now answer the mixed up 5 times table.

a $2 \times 5 = \boxed{}$

b $8 \times 5 = \boxed{}$

c $9 \times 5 = \boxed{}$

d $10 \times 5 = \boxed{}$

e $3 \times 5 = \boxed{}$

f $6 \times 5 = \boxed{}$

g $7 \times 5 = \boxed{}$

h $5 \times 5 = \boxed{}$

i $1 \times 5 = \boxed{}$

j $4 \times 5 = \boxed{}$

6 Write the missing number in each 5 times table fact.

a $\boxed{} \times 5 = 35$

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

c $\boxed{} \times 5 = 50$

d $\boxed{} \times 5 = 15$

e $\boxed{} \times 5 = 40$

f $\boxed{} \times 5 = 10$

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

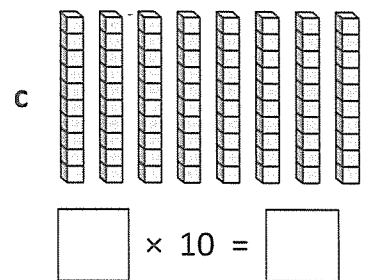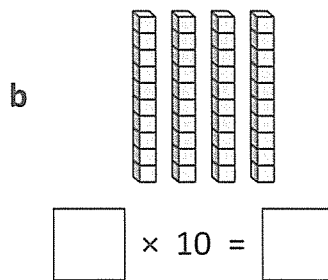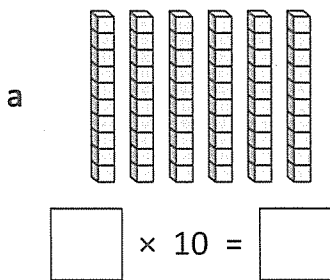h $\boxed{} \times 5 = 45$

Multiplication and Division

Introducing multiplication – 10 times table

If you can skip count in 10s, you know your 10 times table.

1 Complete this sequence by counting in 10s:
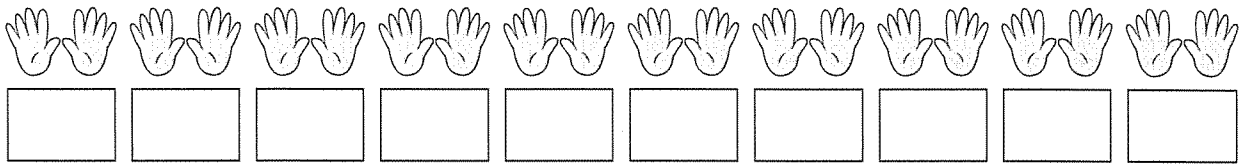
2 Count the longs and then complete the multiplication fact:

a ☐ × 10 = ☐

b ☐ × 10 = ☐

c ☐ × 10 = ☐

3 Complete the 10 times table:

1 × 10 = ☐

2 × 10 = ☐

3 × 10 = ☐

4 × 10 = ☐

5 × 10 = ☐

6 × 10 = ☐

7 × 10 = ☐

8 × 10 = ☐

9 × 10 = ☐

10 × 10 = ☐

4 Write the missing number in each 10 times table fact:

a ☐ × 10 = 50

b ☐ × 10 = 80

c ☐ × 10 = 70

5 Complete this × 10 wheel:

×10 — 2, 9, 10, 5, 7, 3, 4, 6
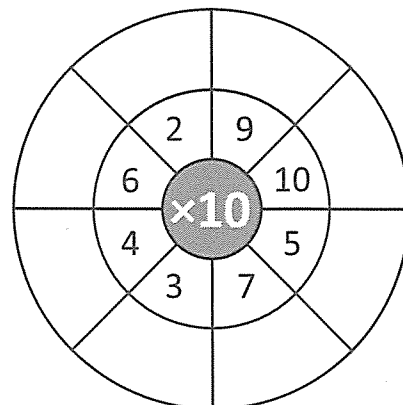
Introducing multiplication – multiplying any number by 10

When we multiply any number by 10, a zero goes in the units column and the digits all move one space along to the left.

Hundreds	Tens	Units
		2
	2	0

$2 \times 10 = 20$

1 Show how the digits all move along when they are multiplied by 10 and write the answers below:

a

Hundreds	Tens	Units
		7
	7	0

$7 \times 10 = $ ⬚

b

Hundreds	Tens	Units
		3

$3 \times 10 = $ ⬚

c

Hundreds	Tens	Units
	1	5

$15 \times 10 = $ ⬚

d

Hundreds	Tens	Units
	2	2

$22 \times 10 = $ ⬚

2 Connect these × 10 facts to the answers:

16×10	62×10	93×10	99×10	13×10

(220) (510) (930) (990) (850) (160) (130) (620) (720) (980)

72×10	51×10	85×10	22×10	98×10

D SERIES   1 TOPIC

Multiplication and Division

Copyright © 3P Learning

Introducing multiplication – multiplying numbers by 0 and 1

Any number multiplied by 1 always equals the same number.

Any number multiplied by 0 always equals zero.
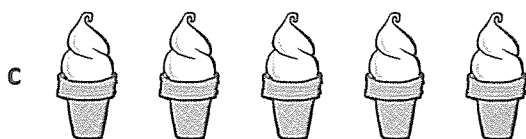
1 Practise multiplying by 1:

a

8 groups of 1 are equal to ☐

☐ × 1 = ☐

b

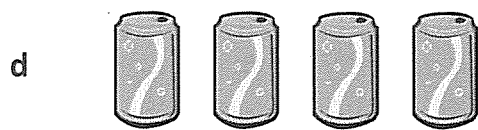6 groups of 1 are equal to ☐

☐ × 1 = ☐

c

5 groups of 1 are equal to ☐

☐ × 1 = ☐

d

4 groups of 1 are equal to ☐

☐ × 1 = ☐

2 Practise multiplying by 1 and 0:

a $12 \times 0 =$ ☐

b $6 \times 1 =$ ☐

c $3 \times 0 =$ ☐

d $2 \times 1 =$ ☐

e $8 \times 0 =$ ☐

f $20 \times 1 =$ ☐
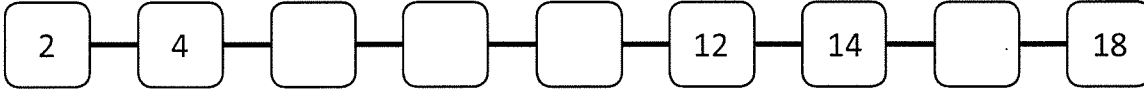
3 Complete this grid:
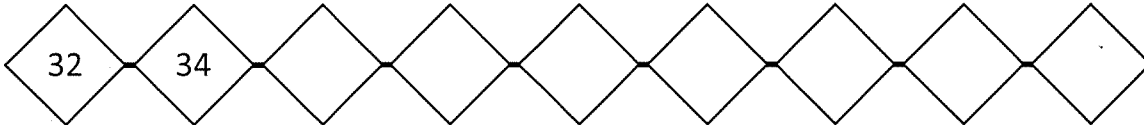
×	9	10	6	1	5	4	7	3	8	2
0										
1										
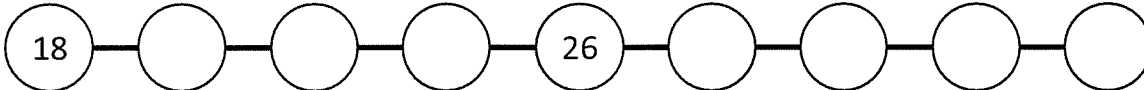
Multiplication facts – 2 times table

Counting in 2s, will help you know many times table facts.
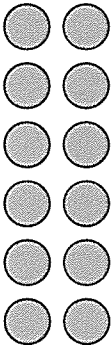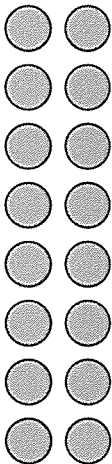
1 **Complete each pattern by counting in 2s:**

a [2]—[4]—[ ]—[ ]—[ ]—[12]—[14]—[ ]—[18]

b ◇ 32 ◇ 34 ◇ ◇ ◇ ◇ ◇ ◇ ◇ ◇

c (18)—( )—( )—( )—(26)—( )—( )—( )—( )

2 **Show how many dots there are in each array by counting in 2s. Then write the times table fact below:**
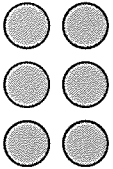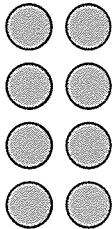
a 6 twos

[ ] × 2 = [ ]
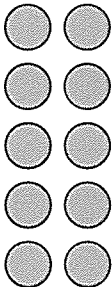
b 8 twos

[ ] × 2 = [ ]

c 3 twos

[ ] × 2 = [ ]
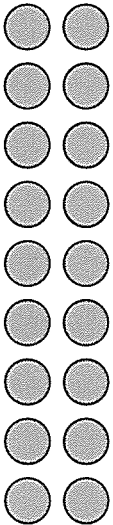
d 5 twos

[ ] × 2 = [ ]

e 4 twos

[ ] × 2 = [ ]

f 9 twos

[ ] × 2 = [ ]

D SERIES **2** TOPIC

Multiplication and Division
Copyright © 3P Learning

Multiplication facts – 2 times table

3 How many straws are in:

a 3 drinks?

☐ × 2 = ☐

b 10 drinks?

☐ × 2 = ☐

c 5 drinks?

☐ × 2 = ☐

d 2 drinks?

☐ × 2 = ☐

---

4 How many wheels have:

a 4 bikes?

☐ × 2 = ☐

b 9 bikes?

☐ × 2 = ☐

c 7 bikes?

☐ × 2 = ☐

d 3 bikes?

☐ × 2 = ☐

---
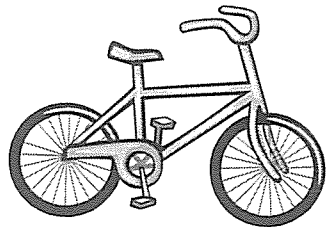
5 Double each number:

a 6 × 2 = ☐

b 9 × 2 = ☐

c 8 × 2 = ☐

d 7 × 2 = ☐

> Multiplying by 2 is the same as doubling.

REMEMBER

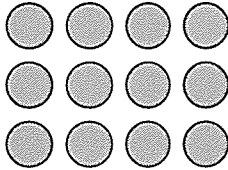**6** Complete this doubling wheel. These facts are not in the 2 times table, but they are facts that are useful to know.
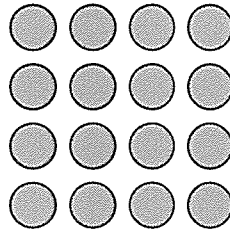
Double

12 16

20   50

18 15
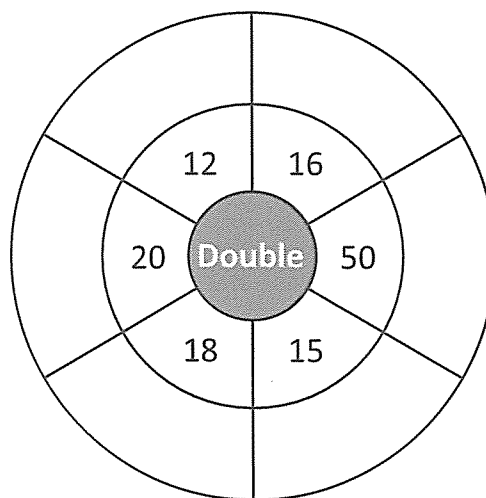
Multiplication facts – 4 times table

> Practise your 4 times table.

1 Write the multiplication fact for each array:

a 3 fours

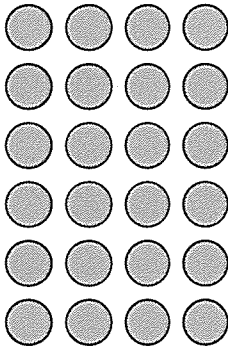$\boxed{} \times 4 = \boxed{}$

b 4 fours

$\boxed{} \times 4 = \boxed{}$
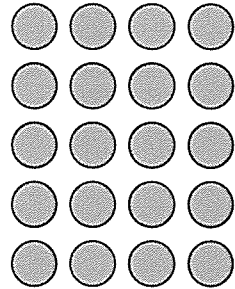
c 5 fours

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

d 6 fours

$\boxed{} \times 4 = \boxed{}$
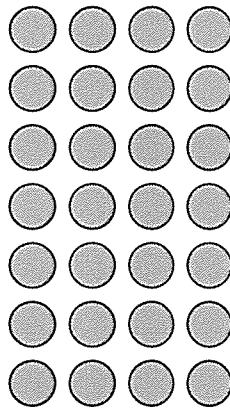
e 7 fours

$\boxed{} \times 4 = \boxed{}$
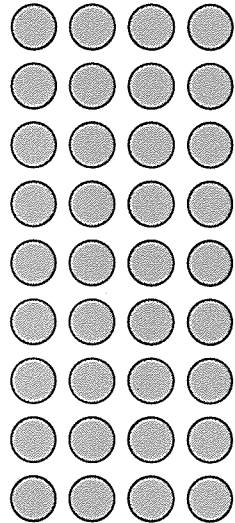
f 9 fours

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

2 How many cupcakes are there on:

a 4 plates?

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

b 3 plates?

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

c 7 plates?

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

d 9 plates?

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

e 2 plates?

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

D **2**

SERIES   TOPIC

Multiplication and Division

Multiplication facts – 4 times table

3 Here is a half of a hundred grid:

a Circle the counting pattern of 2s. Cross the counting pattern of 4s.

b What do you notice?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

_____

_____

4 Complete the matching × 2 and × 4 facts:

a 6 × 2 = 12 and 3 × 4 = 12
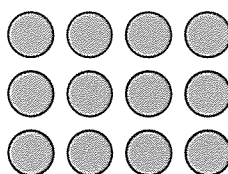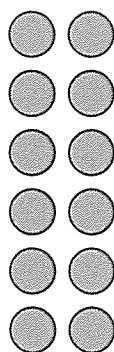
So, ☐ × 2 = ☐ × 4

> Can you see that the × 4 arrays have half the rows and double the columns of the × 2? This means there is the same total, but the array is arranged differently.

THINK

b ☐ × 2 = ☐ and ☐ × 4 = ☐
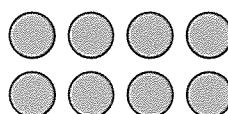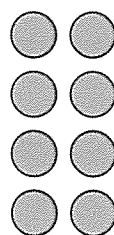
So, ☐ × 2 = ☐ × 4

c 8 × 2 = ☐ × 4

d 10 × 2 = ☐ × 4

Multiplication facts – 3 times table

Practise your 3 times table.

1 **Use this array to complete the 3 times table:**

$1 \times 3 =$ ☐
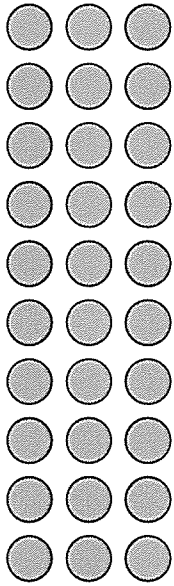
$2 \times 3 =$ ☐

$3 \times 3 =$ ☐

$4 \times 3 =$ ☐

$5 \times 3 =$ ☐

$6 \times 3 =$ ☐

$7 \times 3 =$ ☐

$8 \times 3 =$ ☐

$9 \times 3 =$ ☐

$10 \times 3 =$ ☐

2 **Now try them mixed up:**

a $3 \times 3 =$ ☐   b $8 \times 3 =$ ☐

c $7 \times 3 =$ ☐   d $10 \times 3 =$ ☐

e $2 \times 3 =$ ☐   f $4 \times 3 =$ ☐

g $5 \times 3 =$ ☐   h $6 \times 3 =$ ☐

i $9 \times 3 =$ ☐   j $1 \times 3 =$ ☐

3 Alfred is an alien from the Planet Trampolon. The surface of Planet Trampolon is like walking on a trampoline. That's why Alfred and all his race of aliens need 3 legs for extra balance. They also have 3 fingers on each hand and 3 eyes.

a How many legs for:

6 aliens?   4 aliens?

$6 \times$ ☐ $=$ ☐ $4 \times$ ☐ $=$ ☐

b How many eyes for:

3 aliens?   10 aliens?

☐ $\times$ ☐ $=$ ☐   ☐ $\times$ ☐ $=$ ☐

c How many fingers on one hand for:

9 aliens?   5 aliens?

☐ $\times$ ☐ $=$ ☐   ☐ $\times$ ☐ $=$ ☐

Multiplication and Division
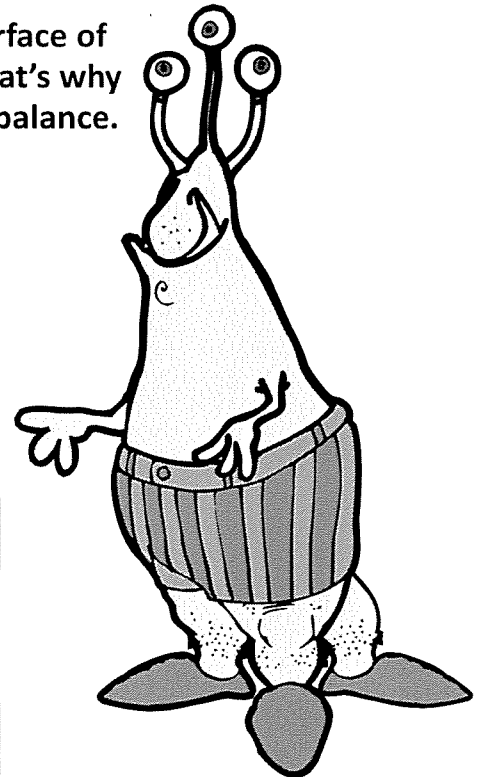
Multiplication facts – 3 times table

4 Label the number line so it goes up in 3s:

0   3   [ ]   [ ]   [ ]   [ ]   [ ]   [ ]   [ ]   [ ]   [ ]
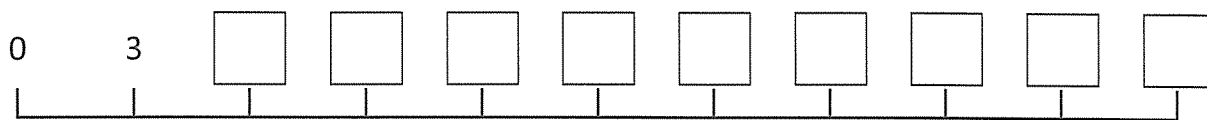
5 Write two turnaround facts for each array. The first one has been done for you.
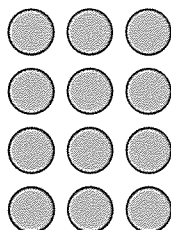
a | 4 | × | 3 | = | 12 |

   | 3 | × | 4 | = | 12 |
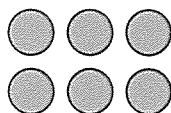
b [ ] × [ ] = [ ]

   [ ] × [ ] = [ ]
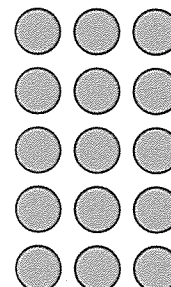
c [ ] × [ ] = [ ]

   [ ] × [ ] = [ ]
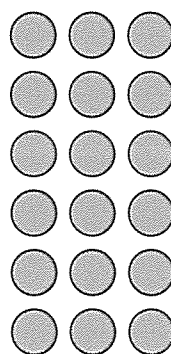
d [ ] × [ ] = [ ]

   [ ] × [ ] = [ ]
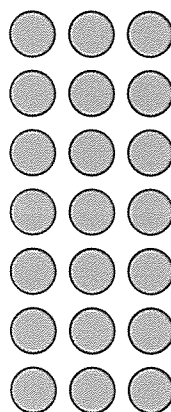
e [ ] × [ ] = [ ]

   [ ] × [ ] = [ ]

f [ ] × [ ] = [ ]

   [ ] × [ ] = [ ]
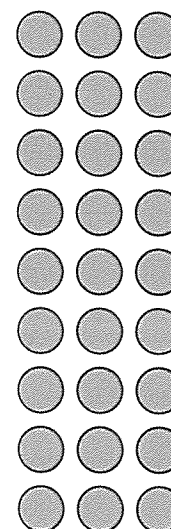
Multiplication facts – 6 times table

Practise your 6 times table. Did you know that we can use × 6 for short? So × 6 just means 6 times table, just as × 3 means 3 times table.

1 Use this array to complete the 6 times table:

1 × 6 = ☐
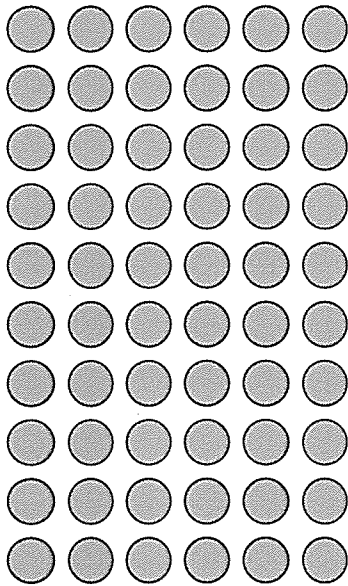
2 × 6 = ☐

3 × 6 = ☐

4 × 6 = ☐

5 × 6 = ☐

6 × 6 = ☐

7 × 6 = ☐

8 × 6 = ☐

9 × 6 = ☐

10 × 6 = ☐

2 Fill in the missing numbers:

a ☐ × 6 = 54

b ☐ × 6 = 36

c ☐ × 6 = 18

d ☐ × 6 = 24

e ☐ × 6 = 60

f ☐ × 6 = 12

g ☐ × 6 = 48

3 Complete this table by recalling the 3 times table. Then complete the 6 times table. Can you see how the 3 times table helps with the 6?

	3	8	2	5	9	10	6
× 3							
× 6							

4 Solve these problems.

a I saved $7 every week over 6 weeks. How much did I save in total?

☐ × ☐ = ☐

b 8 pencil cases had 3 blue pens in each. How many blue pens are there in total?

☐ × ☐ = ☐

c 9 classes each baked 6 cakes for the school fundraiser. How many cakes were baked in total?

☐ × ☐ = ☐

D SERIES   2 TOPIC

Multiplication and Division

Mental multiplication strategies – compensation strategy

3 Use the compensation strategy. This time you have to think of the next multiple of ten and what you have to build down by. The first one has been done for you.
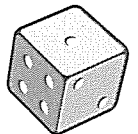
a $3 \times 39 \longrightarrow 3 \times \boxed{40} = \boxed{120} - \boxed{3}$

So, $3 \times 39 = \boxed{117}$

b $4 \times 29 \longrightarrow 4 \times \boxed{} = \boxed{} - \boxed{}$

So, $4 \times 29 = \boxed{}$

c $6 \times 19 \longrightarrow 6 \times \boxed{} = \boxed{} - \boxed{}$

So, $6 \times 19 = \boxed{}$

d $5 \times 59 \longrightarrow 5 \times \boxed{} = \boxed{} - \boxed{}$

So, $5 \times 59 = \boxed{}$

---

4 Roll a die to make your own multiplication questions. Choose the compensation strategy for one column and the split strategy for the other.

a $\boxed{} \times 29 = \boxed{}$

b $\boxed{} \times 39 = \boxed{}$

c $\boxed{} \times 19 = \boxed{}$

Which strategy did you use and why?

a $\boxed{} \times 13 = \boxed{}$

b $\boxed{} \times 12 = \boxed{}$
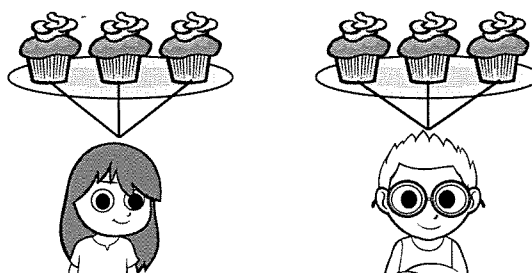
c $\boxed{} \times 13 = \boxed{}$

Which strategy did you use and why?
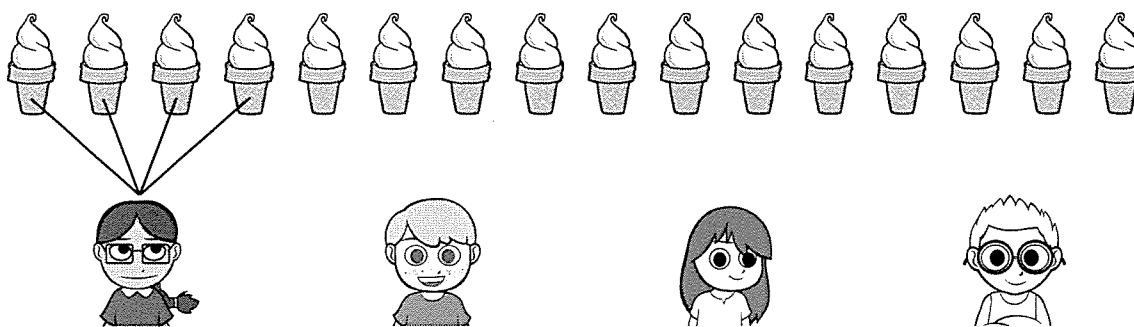
Division – sharing and grouping

Division is when we make fair shares.

If we share these 6 cakes equally between 2 kids, they each get 3 cakes. We call these fair shares because each share is equal.
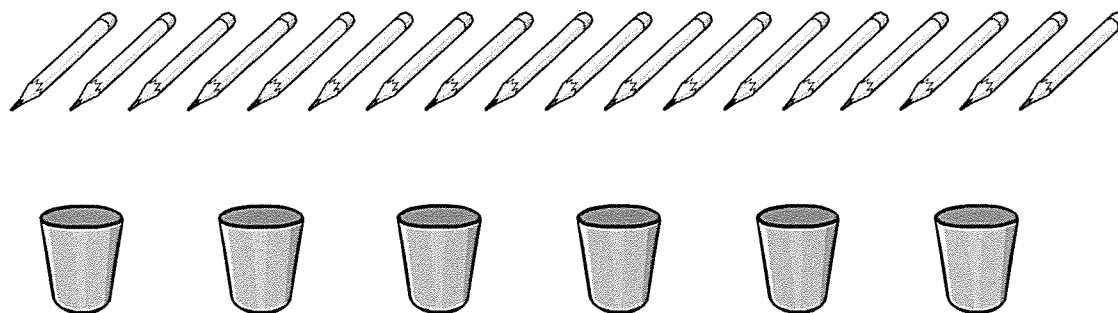
1 Share the items equally in each picture by drawing lines to connect them. Write how many are in each share.
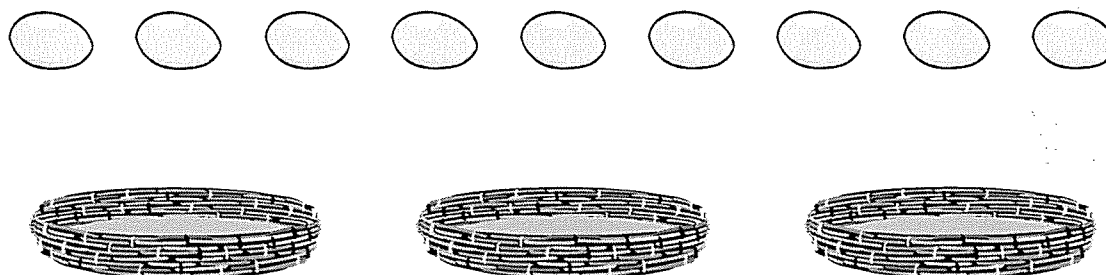
a Share these 16 ice creams between 4 kids. 4 equal shares = _____ each

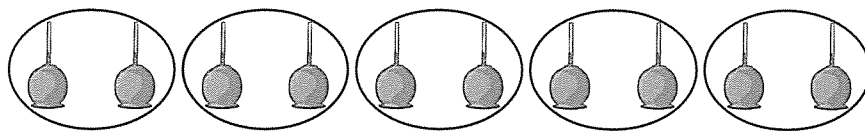**b** Share these 18 pencils between 6 pots. 6 equal shares = _____ each

c Share these 9 eggs between 3 baskets. 3 equal shares = _____ each

D SERIES

4 TOPIC

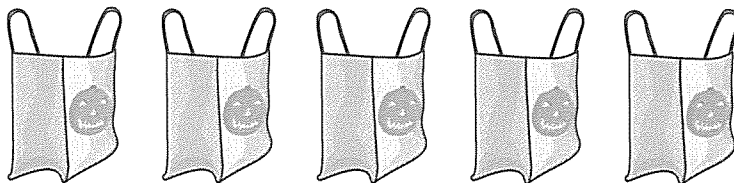Multiplication and Division
Copyright © 3P Learning

Division – sharing and grouping

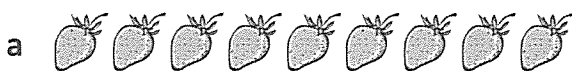Division is also when we make equal groups.

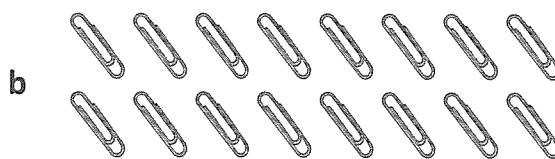Here are 10 candy apples. How many bags do we need if we put 2 in each bag?

If we circle 2 candy apples in each group, we can make 5 groups. So, we need 5 bags.
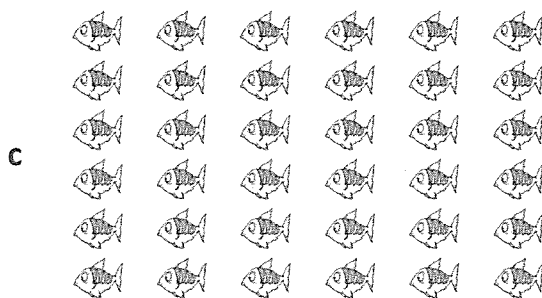
2 Circle equal groups in each picture and write how many are in each share:
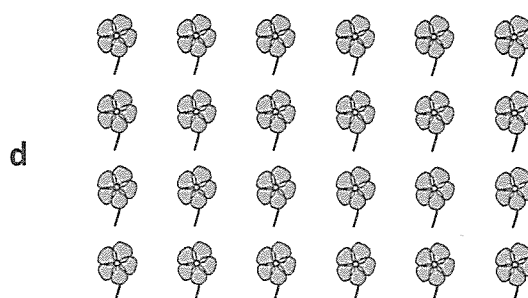
a

Out of 9 strawberries, how many groups are there if there are 3 in each group?

b

Out of 16 paper clips, how many groups are there if there are 4 in each group?

c

Out of 36 fish, how many groups are there if there are 6 in each group?

d

Out of 24 flowers, how many groups are there if there are 4 in each group?
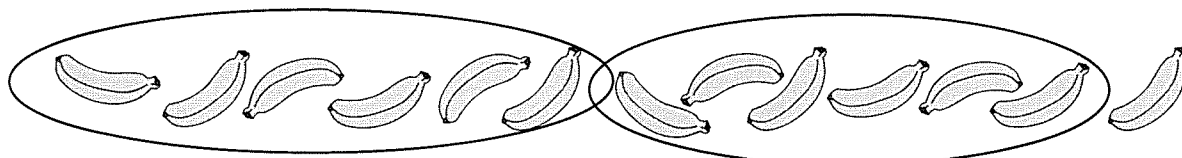
3 Draw a picture to show 7 groups with 5 in each share.

How many in total?
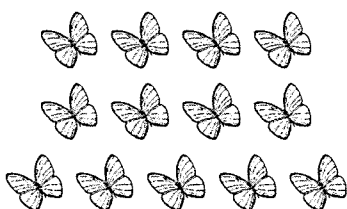
Division – left overs

Sometimes when we make equal groups there are some left over.

Here are 13 bananas. If we make 2 equal groups of 6, there is 1 banana left over.

① Make groups of each of the following items and show the left overs:

a Here are 13 butterflies:

If we make _____ equal groups

of 3 there is _____ left over.

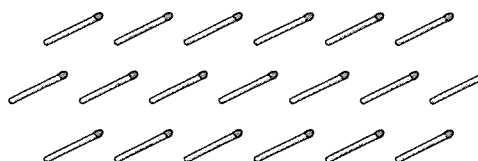**b** Here are 16 apples:

If we make _____ equal groups

of 7 there are _____ left over.

c Here are 21 paper planes:

If we make _____ equal groups

of 6 there are _____ left over.

d Here are 19 match sticks:

If we make _____ equal groups

of 5 there are _____ left over.

② Draw a picture to show 12 groups of 2 with 1 left over.

How many are there in total? [ ]

Multiplication and Division

Copyright © 3P Learning