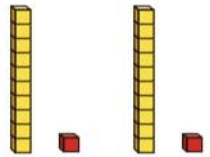
11 and 12 times-table

1 The base 10 represents 2 × 11



2 × 11 = 22

Use base 10 to work out 3 × 11

Draw your base 10 and complete the multiplication.

3 × 11 = 33

2 Complete the calculations.

5 × 11 = 55

7 × 11 = 77

9 × 11 = 99

4 × 11 = 44

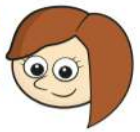
6 × 11 = 66

3 × 11 = 33

10 × 11 = 110

12 × 11 = 132

3 Rosie is spotting patterns in the 11 times-table.



When I add together the digits of each multiple of 11, I always get an even number.

2 × 11 = 22
2 + 2 = 4 which is an even number

a) Do you agree with Rosie? Yes

Explain your answer.

Various answers.

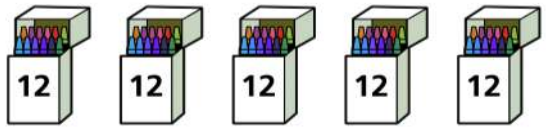
b) What else do you notice?

What other patterns can you see in the 11 times-table?

Talk about it with a partner.

4 Crayons come in packs of 12

Dora buys 5 packs of crayons.



How many crayons does she have?

Dora has 60 crayons.

5 Ron uses a bar model to represent 84 divided by 12

84											
12	12	12	12	12	12	12	12	12	12	12	12

a) Explain Ron's mistake.

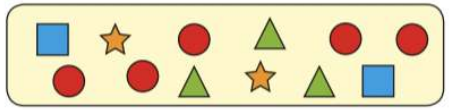
He has split his bar into 12 sections and wrote 12 in each.

b) Draw the correct bar model diagram to represent 84 divided by 12

84											
7	7	7	7	7	7	7	7	7	7	7	7

6 Amir is making pictures using shapes.

Here is one picture.



Amir makes 12 pictures like this one.

a) How many shapes does he use altogether?
Show your working.

144

b) If each picture is exactly the same, how many of each shape does Amir use?

■ = 24 ★ = 24

● = 60 ▲ = 36

7 Mr Scott is organising a cricket tournament.

a) There are 11 players in a cricket team.

5 teams have signed up for the tournament.

How many players have signed up?

55

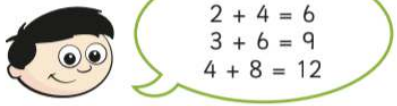
b) Mr Scott needs 132 players signed up to go ahead with the tournament.

How many more teams are needed?

7 more teams are needed.

8 Dexter has been looking at the 12 times-table.

He notices something when he adds the digits of the multiples of 12 together.



a) Dexter thinks the next number in the pattern will be 15

Is he correct? No

Explain your answer. 6 + 0 = 6

b) What happens when he tries this for all the multiples of 12 up to 12 × 12?

Is there a pattern?