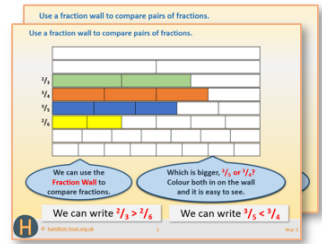


Week 13, Day 1

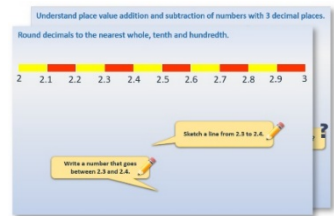
Use knowledge of tables & place value to divide multiples of 10

Each day covers one maths topic. It should take you about 1 hour or just a little more.

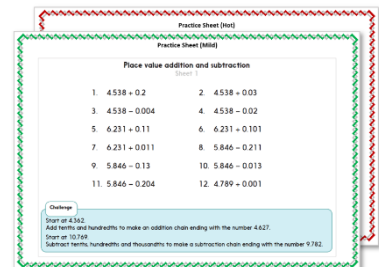
1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.



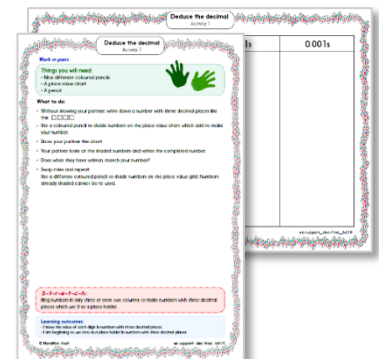
OR start by carefully reading through the **Learning Reminders**.



2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**



4. Think you've cracked it? Whizzed through the Practice Sheets? Have a go at the **Investigation...**

Learning Reminders

Use knowledge of times tables and place value to divide multiples of 10, e.g. $350 \div 7$.

$$\begin{aligned}35 \div 7 &= 5 \\350 \div 7 &= 50 \\3500 \div 7 &= 500\end{aligned}$$

We can use our times tables and place value to divide really big multiples of 10!

The answer to the second is 10 times the first, and the answer to the third is 100 times the first.

Now try:
 $120 \div 6$, $250 \div 5$, $480 \div 8$.

Answers

20, 50, 60

Learning Reminders

Use knowledge of times tables and place value to divide multiples of 10, e.g. $350 \div 7$.

1, 2, 3, 4, 6, 8, 12, 24
are all factors of 24.

We can use these to
write lots of divisions
beginning with 240.

$$240 \div 4 = 60$$

$$240 \div 6 = 40$$

$$240 \div 8 = 30$$

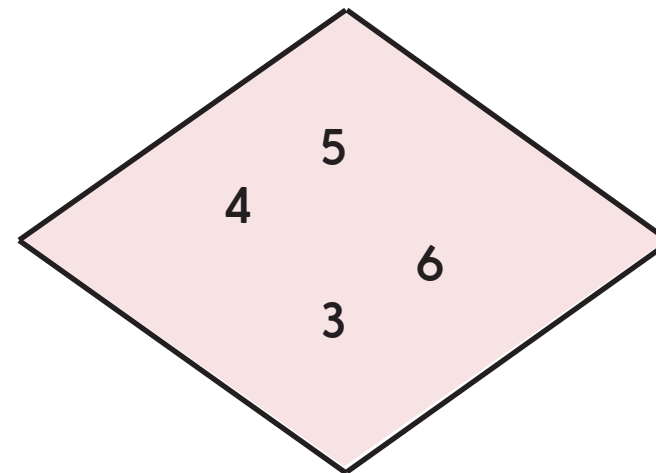
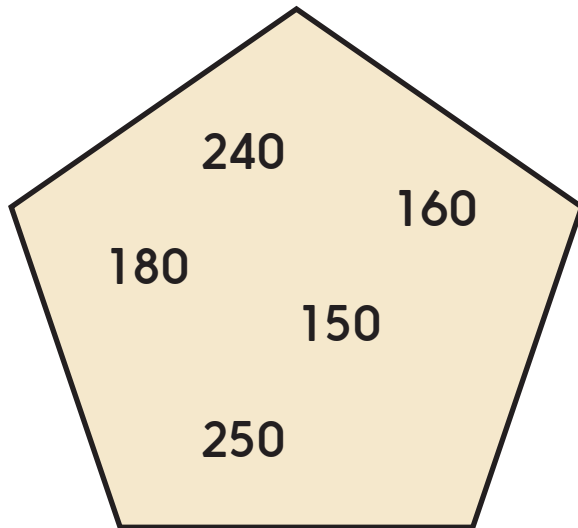
$$240 \div 12 = 20$$

We will use this idea in
our investigation
today!

Practice Sheet Mild

Use times tables to divide

Choose a number from the first set to divide by a number from the second set.
Your answer must be whole number.



How many divisions can you write using times tables facts that you know?

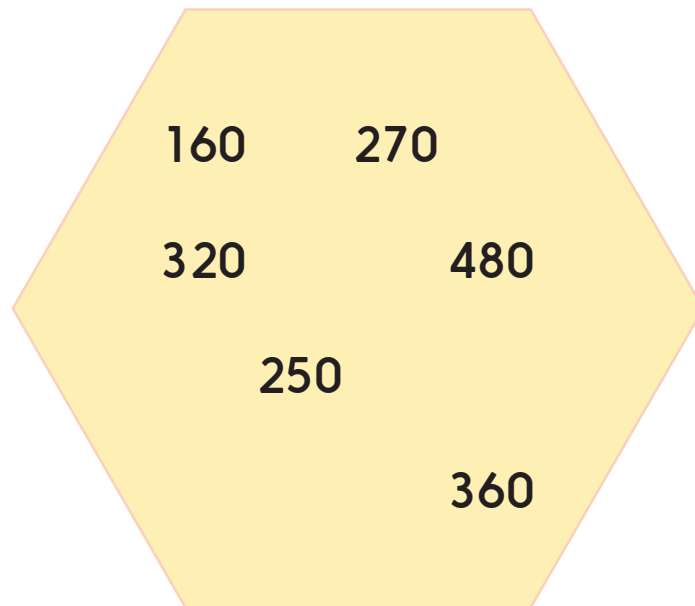
Challenge

Which of the single-digit numbers is a factor of all of the 3-digit numbers?
How can you be sure without doing every division?

Practice Sheet Hot

Use times tables to divide

Choose a number from the first set to divide by a number from the second set.
Your answer must be whole number.



How many divisions can you write using times tables facts that you know?

Challenge

1. Which of the single-digit numbers is a factor of all of the 3-digit numbers?
How can you be sure without doing every division?
2. Explain, without doing a calculation, why 9 isn't a factor of 320.

Practice Sheets Answers

Use times tables to divide (mild)

$240 \div 3 = 80$

$160 \div 4 = 40$

$180 \div 3 = 60$

$150 \div 3 = 50$

$250 \div 5 = 50$

$240 \div 4 = 60$

$160 \div 5 = 32$

$180 \div 4 = 45$

$150 \div 5 = 48$

$250 \div 6 = 40$

3 4 5 6

$240 \div 5 = 48$

$180 \div 5 = 36$

$150 \div 6 = 25$

$240 \div 6 = 40$

$180 \div 6 = 30$

Challenge

5 is a factor of all the three-digit numbers. You can tell as it ends with a zero, and so don't need to do every single calculation.

Use times tables to divide (hot)

$270 \div 3 = 90$

$480 \div 3 = 160$

$360 \div 3 = 120$

$160 \div 8 = 20$

$320 \div 8 = 40$

$480 \div 8 = 60$

$360 \div 8 = 45$

$160 \div 4 = 40$

$320 \div 4 = 80$

$480 \div 4 = 120$

$360 \div 4 = 90$

$270 \div 9 = 30$

$360 \div 9 = 40$

$160 \div 5 = 32$

$270 \div 5 = 54$

$320 \div 5 = 64$

$480 \div 5 = 96$

$250 \div 5 = 50$

$360 \div 5 = 72$

$270 \div 6 = 45$

$480 \div 6 = 80$

$360 \div 6 = 60$

Challenge

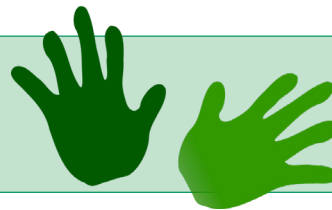
- 5 is a factor of all the three-digit numbers. You can tell as it ends with a zero, and so don't need to do every single calculation.
- All multiples of 9 are also multiples of 3. 320 is not a multiple of 3. 320 cannot be a multiple of 9.

A Bit Stuck? Creepy crawlies

Work in pairs

Things you will need:

- A set of 0 to 12 cards
- Ten creepy crawly cards



What to do:

- Shuffle the 0 to 12 cards and place face down.
- Turn over the top card.
This is the number of creepy crawlies hiding under a stone.
- Take that number of creepy crawly cards.
Use clever counting to work out the number of legs.
- Return the card to the bottom of the pack.
BUT if you knew the answer without using clever counting, keep the card.
- Turn over the next card and repeat.
- Keep playing the game until you don't have many cards left in the pack because you have learned so many facts!

For example:

You choose the 5 card, so take 5 of the creepy crawly pictures.

You'll see that each of them has 6 legs...

Write a multiplication with a missing number: $5 \times 6 = \square$

Do you already know the answer? If not, use 'clever counting' in 6s to

find how many legs there are altogether: 6, 12, 18, 24, 30

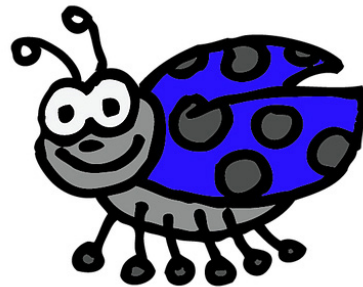
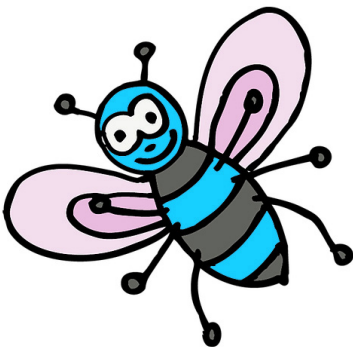
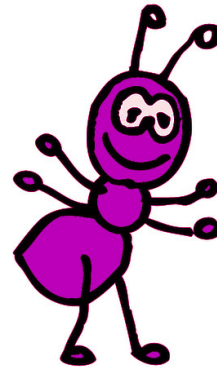
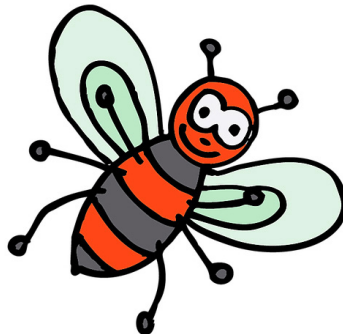
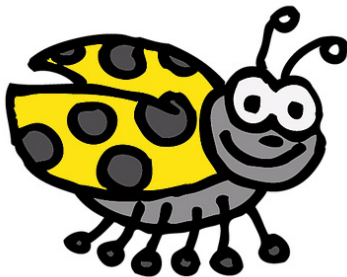
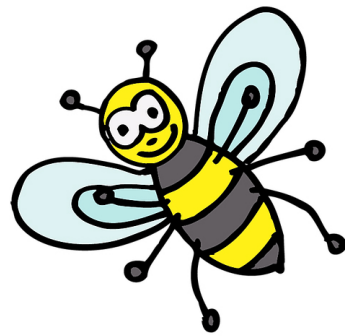
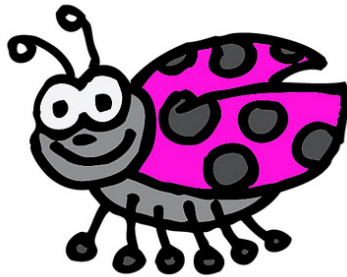
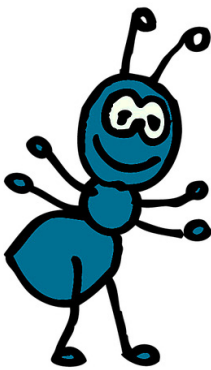
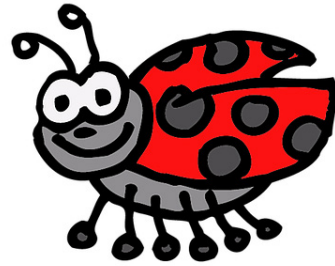
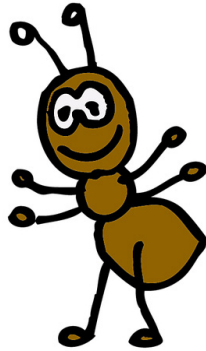
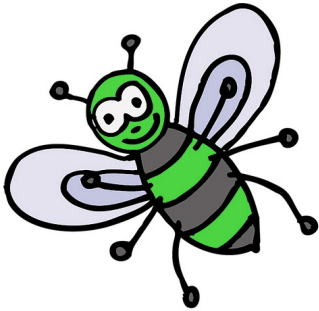
S-t-r-e-t-c-h:

Use the 0 to 12 cards. See if you can learn eight facts by heart!

Learning outcomes:

- I can multiply numbers by 6.
- I am beginning to know some facts for the 6 times tables by heart.

A Bit Stuck?
Creepy crawlies



A Bit Stuck?
Creepy crawlies

1

2

3

4

5

6

7

8

9

10

A Bit Stuck?

Creepy crawlies

11

12

Investigation

Great big divisions

36 20 31 18 45 28 42 58 48

Remember!

A factor is any whole number that will divide exactly into another number without a remainder.
Factors of a number always include 1, as well as the number itself.

- Choose one of the numbers and list all of the factors of that number.

18: 1 and 18, 2 and 9, 3 and 6

- Use factors of the number to write divisions beginning with 10x that number.

180
 $180 \div 3 = 60$ $180 \div 9 = 20$ $180 \div 6 = 30$ $180 \div 2 = 90$

- Try this for at least 6 more numbers from the list, writing at least four number sentences for each. Wow, that's a lot of number sentences!
- Were there any numbers for which you couldn't write four divisions? Why do you think that is?

Challenge

Write divisions for **both** 10x and 100x the starting number.

180 and 1800
 $180 \div 3 = 60$ $180 \div 9 = 20$ $180 \div 1 = 180$ $180 \div 2 = 90$
 $1800 \div 3 = 600$ $1800 \div 9 = 200$ $1800 \div 1 = 1800$ $1800 \div 2 = 900$