



Key Facts – Year 5 Autumn 1

Target – To know decimal number bonds to 1 and 10



Key Vocabulary:

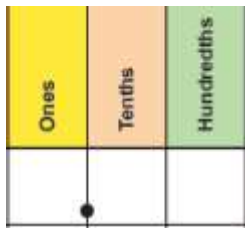
Decimal whole number decimal place
Tens Ones Tenths

Hints:
Link number bonds to 10 to decimal
Ensure children understand that decimal is a 'part of a whole number'

$0.6 + 0.4 = 1$	$3.7 + 6.3 = 10$
$0.4 + 0.6 = 1$	$6.3 + 3.7 = 10$
$1 - 0.4 = 0.6$	$10 - 6.3 = 3.7$
$1 - 0.6 = 0.4$	$10 - 3.7 = 6.3$

Activities

$0.75 + 0.25 = 1$	$4.8 + 5.2 = 10$
$0.25 + 0.75 = 1$	$5.2 + 4.8 = 10$
$1 - 0.25 = 0.75$	$10 - 5.2 = 4.8$
$1 - 0.75 = 0.25$	$10 - 4.8 = 5.2$

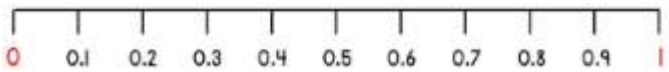


Questions

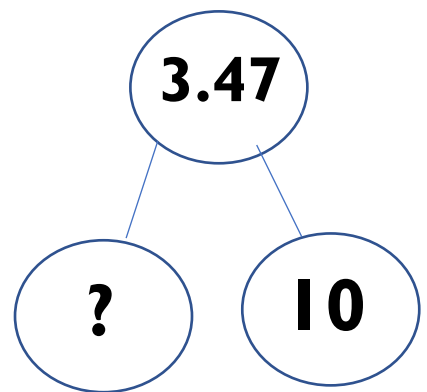
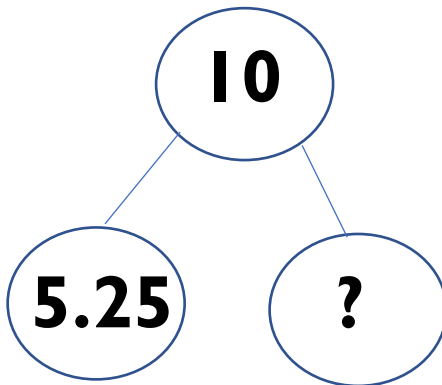
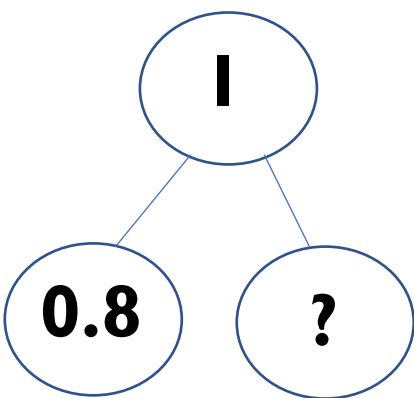
What do I add to 0.4 to get to 1?
What is the difference between 1 and 0.8?
What do I add to 4.5 to get to 10?

Games

Using number cards, make a decimal number (1d.p) below 10, next person has to make to make the number you add to this to get to 10. (same game can be played with numbers below 1, or numbers with 2d.p)



- Key Questions?**
- What actually is a decimal number?
 - How can use my number bonds to 10 to help me?
 - Which decimal number is bigger?
 - What is the value of that digit?





Key Facts – Year 5 Autumn 2

Target – To be able to multiply and divide by 10 and 100



Key Vocabulary:

Decimal whole number decimal place
 Tens Ones Tenths

Hints:

Link number bonds to 10 to decimal
 Ensure children understand that decimal is a 'part of a whole number'

Activities

$7 \times 10 = 70$	$30 \times 10 = 300$	$0.8 \times 10 = 8$
$10 \times 7 = 70$	$10 \times 30 = 300$	$10 \times 0.8 = 8$
$70 \div 7 = 10$	$300 \div 30 = 10$	$8 \div 0.8 = 10$
$70 \div 10 = 7$	$300 \div 10 = 30$	$8 \div 10 = 0.8$

Questions

What is 0.8 multiplied by 10/100?
 What do I have to multiply 10 by to get 8?
 I have 0.8 as an answer, what could my calculation have been?

$6 \times 100 = 600$	$40 \times 100 = 4000$	$0.2 \times 10 = 2$
$100 \times 6 = 600$	$100 \times 40 = 4000$	$10 \times 0.2 = 2$
$600 \div 6 = 100$	$4000 \div 40 = 100$	$2 \div 0.2 = 10$
$600 \div 100 = 6$	$4000 \div 100 = 40$	$2 \div 10 = 0.2$

Games

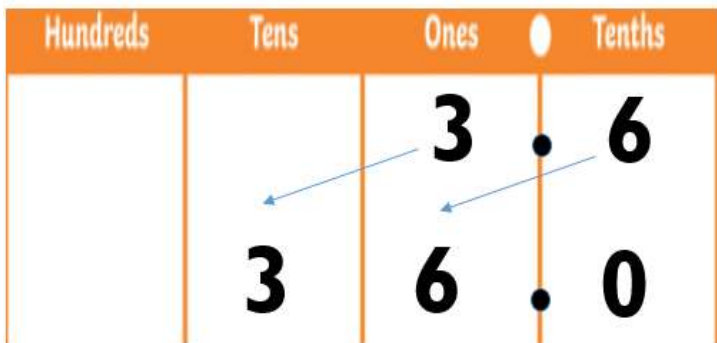
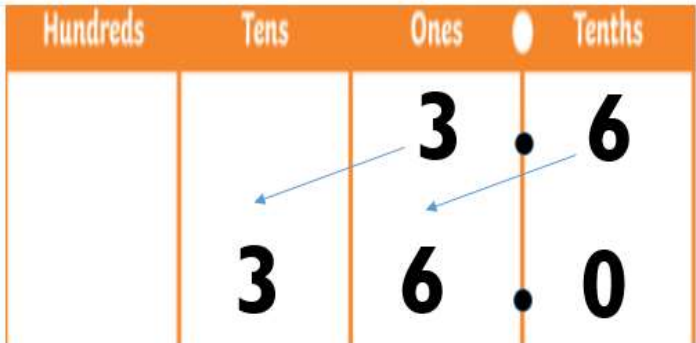
Pick 2 cards to create a 2 digit number. Role a dice, odd means you multiply by 10, even means you divide by 10. The next player repeats this with a different 2 cards, who has the largest number?

Key Questions?

- Can they explain what is actually to the number when we multiply or divide by 10 or 100? (We don't just add on or take off zeros)
- Can children use this knowledge to help multiply and divide by other multiples of 10.

If we multiply by 10, each digit becomes 10 times bigger
 $3.6 \times 10 = 36$

If we divide by 10, each digit becomes 10 times smaller
 $63 \div 10 = 6.3$





Key Facts – Year 5 Spring 1

Target – To recall metric conversions



Key Vocabulary:

grams kilograms metre centimetres
millimetres litre millilitres

Hints:

Refer to 'real life' when discussing the units
Show children what each unit of measurement actually looks like
Make children aware of the abbreviations

Activities

- 1 kilogram = 1000 grams
- 1 kilometre = 1000 metres
- 1 metre = 100 centimetres
- 1 metre = 1000 millimetres
- 1 centimetre = 10 millimetres
- 1 litre = 1000 millilitres

Questions

How many grams are in a kilogram?
If something measures 1 cm, how many mm would this be?
What is bigger a gram or kilogram?

Millimetres	mm
Centimetres	cm
Metre	m
Kilometre	km
Grams	g
Kilogram	kg
Millilitre	ml
Litre	L

Games

Give children an item and let them predict the weight of it.

Give children a tape measure and let them experiment with measuring distances and items, giving the measurements in mm and cm

Key Questions?

- Can children spot a pattern relating to place value when converting
- Can children use place value knowledge to convert decimals as well as 'whole amounts'
- Can children state which amount is larger and which is smaller when given in different units?

Hundreds	Tens	Ones
	1	0
		1

There are 10mm in a 1cm
10 to 1 = ÷ 10

Hundreds	Tens	Ones
		6
6	0	0

Metres to CM
1 to 100
I will multiply by 100



Key Facts – Year 5 Spring 2

Target – To recall prime numbers up to 20



Key Vocabulary:

prime number composite number
factor multiple

Hints:

When discussing prime numbers, bring multiplication knowledge into the conversation.

Activities

A prime number is a number with no factors other than itself and one.

The following numbers are prime numbers:

2, 3, 5, 7, 11, 13, 17, 19

A composite number is divisible by a number other than 1 or itself.

The following numbers are composite numbers:

4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20

Questions

How do I know if a number is prime?
What is the next prime number after 5?
What is the largest single digit prime number?

Games

Number cards to 20 face down, take turns to turn one over, if it is a prime number the first person to shout "PRIME!" wins the card.

Player 1 says the a prime number, Player 2 says the prime number, keep going back and forth until someone says the wrong prime number.

Key Questions?

- Can a child explain why a specific prime number is prime?
- Can a child quickly recall what the prime number is a multiple of?
- Can a child explain why a certain number is not prime?

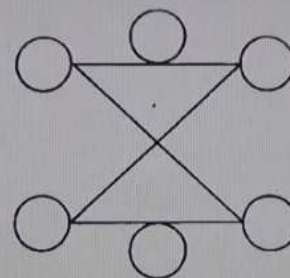


I think 7 is prime

Prove it boy!



A Prime Number Game



Here are seven prime numbers: 5, 7, 11, 13, 17, 19, 23
Can you arrange these prime numbers in the seven circles so that the rows and diagonals add up to the same prime number?



Key Facts – Year 5 Summer 1

Target – To recall square numbers up to 12^2



Key Vocabulary:

Squared multiply square root square
number

Hints:

When we 'square' a number we multiply it by itself
The square root is the number we multiply to its
self to get the square number

Activities

$$\begin{aligned} 1^2 &= 1 \times 1 = 1 \\ 2^2 &= 2 \times 2 = 4 \\ 3^2 &= 3 \times 3 = 9 \\ 4^2 &= 4 \times 4 = 16 \\ 5^2 &= 5 \times 5 = 25 \\ 6^2 &= 6 \times 6 = 36 \\ 7^2 &= 7 \times 7 = 49 \\ 8^2 &= 8 \times 8 = 64 \\ 9^2 &= 9 \times 9 = 81 \\ 10^2 &= 10 \times 10 = 100 \\ 11^2 &= 11 \times 11 = 121 \\ 12^2 &= 12 \times 12 = 144 \end{aligned}$$

$$\begin{aligned} \sqrt{1} &= 1 \\ \sqrt{4} &= 2 \\ \sqrt{9} &= 3 \\ \sqrt{16} &= 4 \\ \sqrt{25} &= 5 \\ \sqrt{36} &= 6 \\ \sqrt{49} &= 7 \\ \sqrt{64} &= 8 \\ \sqrt{81} &= 9 \\ \sqrt{100} &= 10 \\ \sqrt{121} &= 11 \\ \sqrt{144} &= 12 \end{aligned}$$

Questions

What is 8 squared?
What is 7 multiplied by itself?
What is the square root of 144?
Is 81 a square number?

Games

Get children to give a 'fact of a day'
Recall the square numbers in order
Give children a square number to start on, what
square number comes before or after?

Key Questions?

- If you give a child a square number, can they prove if it is or isn't a square number?

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100



Key Facts – Year 5 Summer 2

Target – To find factors pairs of a number



Key Vocabulary:

factor product multiplied

Hints:

Make links to previous learning on multiplication facts
Make links to knowledge of multiplication facts

Activities

$24 = 4 \times 6$

$24 = 8 \times 3$

$56 = 7 \times 8$

$54 = 9 \times 6$

$42 = 6 \times 7$

$25 = 5 \times 5$

$84 = 7 \times 12$

$15 = 5 \times 3$

Games

Get children to give a 'fact of a day'

This is my number, how many factor pairs can you find?

I think '84' has less factor pairs than '12'. Proof it.

Key Questions

- Can children explain what a factor pair actually is?
- Can children quickly recall factor pairs?
- Can children recognise patterns for factor pairs? i.e $1 \times 16 = 16$ $2 \times 8 = 16$ $3 \times 4 = 16$



24...

