

Year 6 Home Learning Developing Fluency

Key Instant Recall Facts

Name:			

Class: _____



Target Tracker

	I know	Instant Recall (date)					
6A	Number bonds to 100						
6B	How to recall facts about durations of time						
6C	How to tell the time						
6D	How to reconginise decimals of fractions						
6E	Decimal number bonds 1-10						
6F	The multiplication and division facts for all times tables up to 12 × 12						
6G	How to recall metric conversions						
6H	How to recall square numbers up to 122 and their square roots.						
61	How to identify prime numbers up to 50.						
6J	How to identify common factors of a pair of numbers.						
6K	How to convert between decimals, fractions and percentages						



Year 6 - 6A

I know number bonds to 100.

Children in Year 6 should know the following facts. The aim is for them to recall these facts **instantly**.

Some examples:

60 + 40 = 100	37 + 63 = 100
40 + 60 = 100	63 + 37 = 100
100 - 40 = 60	100 - 63 = 37
100 - 60 = 40	100 - 37 = 63
75 + 25 = 100	48 + 52 = 100
25 + 75 = 100	52 + 48 = 100
100 - 25 = 75	100 - 52 = 48
100 - 75 = 25	100 - 48 = 52

Key Vocabulary

What do I **add** to 65 to make 100?

What is 100 take away 6?

What is 13 less than 100?

How many more than 98 is 100?

What is the **difference** between 89 and 100?

This list includes some examples of facts that children should know. They should be able to answer questions including missing number questions e.g. $49 + \bigcirc = 100$ or $100 - \bigcirc = 72$.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these key facts while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day.

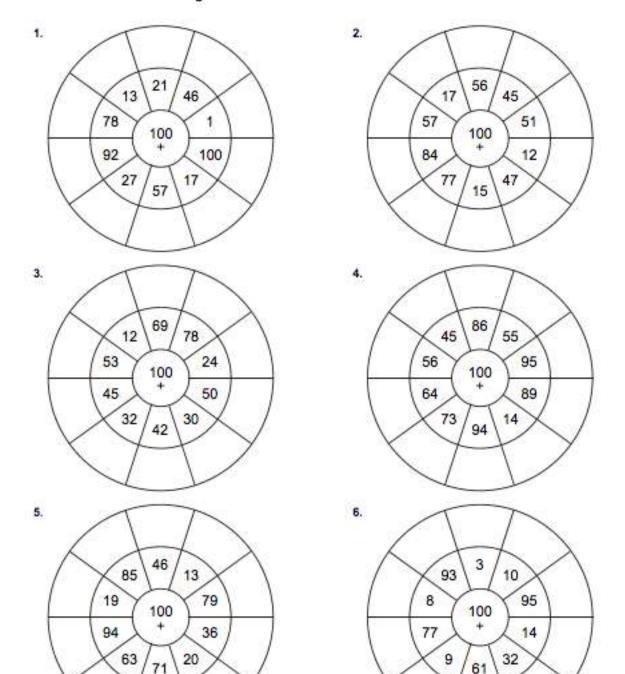
<u>Fact families</u>- If your child knows one fact (e.g. 8 + 5 = 13), can they tell you the other three facts in the same fact family?

<u>Use number bonds to 10</u> - How can number bonds to 10 help you work out number bonds to 100?

<u>Play games</u> – There are missing number questions at <u>www.conkermaths.com</u>. See how many questions you can answer in just 90 seconds. There is also a number bond pair game to play.

Make 100 - Practice

Place a number in the outer circle which adds with the number in the inner circle to make the target number.



For more fun games see:

http://www.topmarks.co.uk/maths-games/hit-the-button



Year 6 - 6B

I can recall facts about durations of time.

Children in Year 6 should know the following facts. The aim is for them to recall these facts **instantly**.

Number of days in each month

There are 60 seconds in a minute.		_		
There are 60 minutes in an hour.	January	31	July	31
There are 24 hours in a day.	February	28/29	August	31
There are 7 days in a week.	March	31	September	30
There are 12 months in a year.	April	30	October	31
There are 365 days in a year.	May	31	November	30
There are 366 days in a leap year.	June	30	December	31
illele die 300 days III d leap yedi.				

Children also need to know the order of the months in a year. They should be able to apply these facts to answer questions, such as:

What day comes after 30th April?

What day comes before 1st February?

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these key facts while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day.

<u>Use rhymes and memory games</u>— The rhyme, *Thirty days hath September*, can help children remember which months have 30 days. There are poems describing the months of the year in order.

<u>Use calendars</u> – If you have a calendar for the new year, your child could be responsible for recording the birthdays of friends and family members in it. Your child could even make their own calendar.

<u>How long is a minute?</u> – Ask your child to sit with their eyes closed for exactly one minute while you time them. Can they guess the length of a minute? Carry out different activities for one minute. How many times can they jump in sixty seconds?

Duration of time- Practice

Mad Maths Minute	15	Mad Maths Minutes					
Units of Time Set A		Units of Time Set B					
days in September	8	days in May	<u> </u>				
minutes in an hour		seconds in a minute					
days in June	31111111	days in a non-leap year	<u> </u>				
years in a decade	Salizanie	days in January					
days in a week	3 413-4	hours in a day	301130				
months in a year		days in November	3 2001				
days in July	2 4 22 24 	minutes in an hour	311126				
days in March		years in a decade					
seconds in a minute	, 2 12.	days in April					
days in a non-leap year	Ş-1	days in a week					
hours in a day	-	days in a leap year					
days in a leap year	-	months in a year					



Year 6 – 6C

I can tell the time.

Children in Year 6 should know the following facts. The aim is for them to recall these facts **instantly**.

Children need to be able to tell the time using a clock with hands. This target can be broken down into several steps.

- I can tell the time to the nearest hour.
- I can tell the time to the nearest half hour.
- I can tell the time to the nearest quarter hour.
- I can tell the time to the nearest five minutes.
- I can tell the time to the nearest minute.

Key Vocabulary

Twelve o'clock

Half past two

Quarter past three

Quarter to nine

Five past one

Twenty-five to ten





Top Tips

The secret to success is practising little and often. Use time wisely.

<u>Talk about time</u> - Discuss what time things happen. When does your child wake up? What time do they eat breakfast? Make sure that you have an analogue clock visible in your house or that your child wears a watch with hands. Once your child is confident telling the time, see if you can find more challenging clocks e.g. with Roman numerals or no numbers marked.

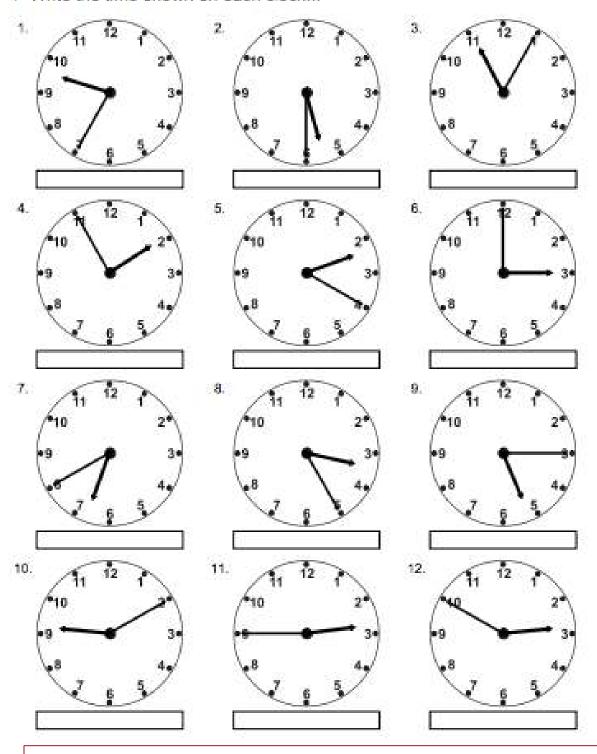
<u>Ask your child the time regularly</u> – You could also give your child some responsibility for watching the clock :

"The cakes need to come out of the oven at twenty-two minutes past four exactly."

"We need to leave the house at twenty-five to nine."

Telling the time- Practice

Write the time shown on each clock...



For more practice go to:www.snappymaths.com/other/measuring/time/time.htm



Year 6 – 6D

I can recognise decimal equivalents of fractions.

Children in Year 6 should know the following facts. The aim is for them to recall these facts **instantly**.

$$\frac{1}{2} = 0.5 \qquad \frac{1}{10} = 0.1 \qquad \frac{1}{100} = 0.01$$

$$\frac{1}{4} = 0.25 \qquad \frac{2}{10} = 0.2 \qquad \frac{7}{100} = 0.07$$

$$\frac{3}{4} = 0.75 \qquad \frac{5}{10} = 0.5 \qquad \frac{21}{100} = 0.21$$

$$\frac{6}{10} = 0.6 \qquad \frac{75}{100} = 0.75$$

$$\frac{9}{10} = 0.9 \qquad \frac{99}{100} = 0.99$$

Key Vocabulary

How many **tenths** is 0.8?

How many **hundredths** is 0.12?

Write 0.75 as a fraction?

Write ¼ as a decimal?

Children should be able to convert between decimals and fractions for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$ and any number of tenths and hundredths.

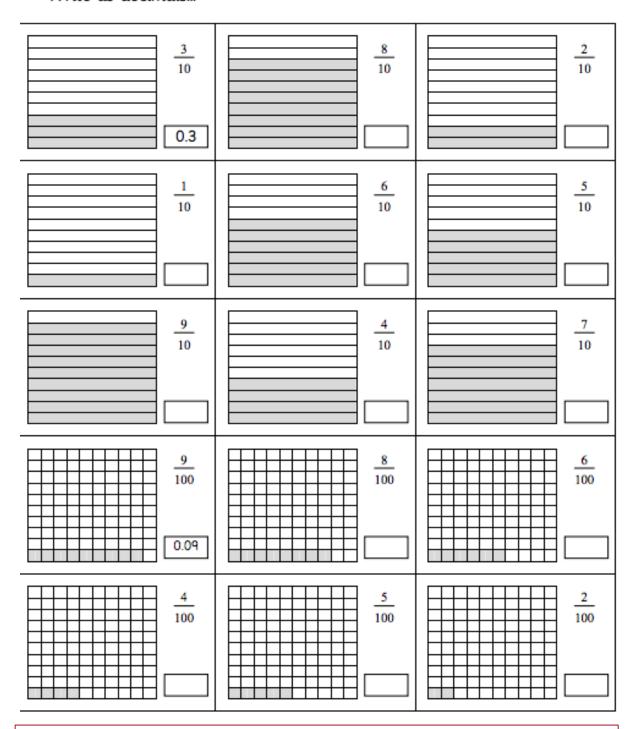
Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these key facts while walking to school or during a car journey? You don't need to practise them all at once: start with tenths before moving on to hundredths.

<u>Play games</u> - Make some cards with pairs of equivalent fractions and decimals. Use these to play the memory game or snap. Or make your own dominoes with fractions on one side and decimals on the other.

Decimal equivalents of fractions- Practice

Write as decimals...



For more practice go to:-

http://www.topmarks.co.uk/maths-games/7-11years/fractions-and-decimals



Year 6 – 6E

I know decimal number bonds to 1 and 10.

Children in Year 6 should know the following facts. The aim is for them to recall these facts **instantly**.

Some examples:

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
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

Key Vocabulary

What do I add to 0.8 to make 1?

What is 1 take away 0.06?

What is 1.3 less than 10?

How many more than 9.8 is 10?

What is the **difference** between 0.92 and 10?

This list includes some examples of facts that children should know. They should be able to answer questions including missing number questions e.g. $0.49 + \bigcirc = 10$ or $7.2 + \bigcirc = 10$.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these key facts while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day.

<u>Fact families</u>- If your child knows one fact (e.g. 8 + 5 = 13), can they tell you the other three facts in the same fact family?

<u>Use number bonds to 10</u> - How can number bonds to 10 help you work out number bonds to 100?

<u>Play games</u> – There are missing number questions at <u>www.conkermaths.com</u>. See how many questions you can answer in just 90 seconds. There is also a number bond pair game to play.

Decimal number bonds by I- Practice

Make 1 (decim	ials – tenths) Set A	Make 1 (decimals – tenths) Set B					
0.4 + = 1	+ 0.8 = 1	0.8 + = 1	+ 0.9 = 1				
+ 0.9 = 1	0.1 + = 1	+ 0.6 = 1	0.3 + = 1				
0.1 += 1	+ 0.5 = 1	0.1 + = 1	+ 0.8 = 1				
+ 0.6 = 1	0.3 + = 1	+ 0.4 = 1	1+=1				
0.5 + = 1	+ 0.9 = 1	0.9 + = 1	+ 0.1 = 1				
+ 0.2 = 1	0 + = 1	+ 0.3 = 1	0.5 + = 1				
0.7 + = 1	+ 0.4 = 1	0.5 + = 1	+ 0.6 = 1				
+1=1	0.8 + = 1	+ 0.2 = 1	0.4 + = 1				
0 + = 1	+ 0.3 = 1	0+=1	+ 0.3 = 1				
+ 0.8 = 1	0.1 + = 1	+1=1	0.2 + = 1				
0.3 += 1	+ 0.2 = 1	0.7 + = 1	+ 0.5 = 1				
+ 0.7 = 1	0.5 + = 1	+ 0.2 = 1	0.9 + = 1				
0.2 + = 1	+ 0.7 = 1	0.4 + = 1	+ 0.7 = 1				
+1=1	0.9 + = 1	+ 0 = 1	0.8 + = 1				
0.6 + = 1	+ 0.4 = 1	0.7 + = 1	+ 0,6 = 1				

For more practice go to:-

http://www.mathplayground.com/number_bonds_decimals.html



Year 6 – 6F

I know the multiplication and division facts for all times tables up to 12×12 .

Children in Year 6 should know the following facts. The aim is for them to recall these facts **instantly**.

Please see separate sheet for all times table facts.

This is a chance for Year 6 children to consolidate their knowledge of multiplication and division facts and to increase their speed of recall.

Key Vocabulary

What is 12 multiplied by 6?

What is 7 times 8?

What is 84 divided by 7?

They should be able to answer these questions in any order, including missing number questions e.g. $7 \times \bigcirc = 28$ or $\bigcirc \div 6 = 7$.

Children who have already mastered their times tables should apply this knowledge to answer questions including decimals e.g. $0.7 \times \bigcirc = 4.2$ or $\bigcirc \div 60 = 0.7$

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these key facts while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact family of the day.

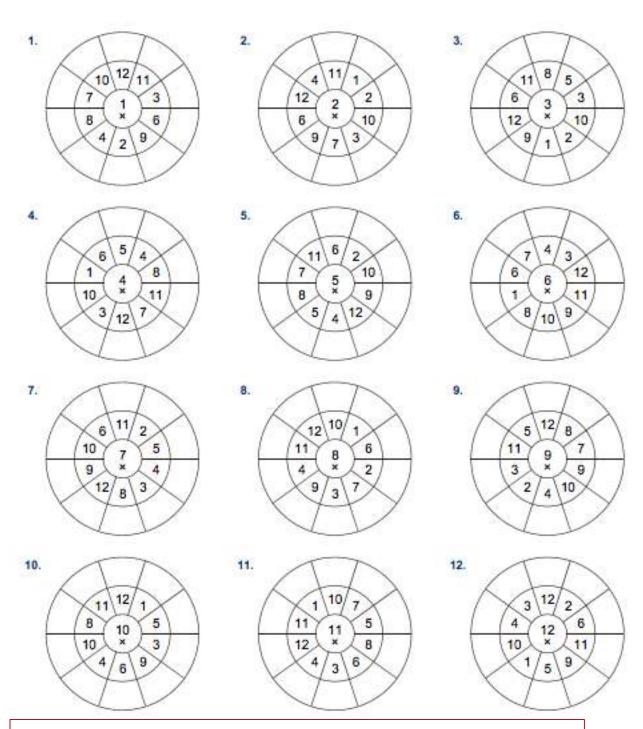
<u>Speed Challenge</u> – Take two packs of playing cards and remove the kings. Turn over two cards and ask your child to multiply the numbers together (Ace = 1, Jack = 11, Queen = 12). How many questions can they answer correctly in 2 minutes? Practise regularly and see if they can beat their high score.

<u>Online games</u> – There are many games online which can help children practise their multiplication and division facts. <u>www.conkermaths.org</u> is a good place to start.

<u>Use memory tricks</u> – For those hard-to-remember facts, www.multiplication.com has some strange picture stories to help children remember.

Multiply up to 12 x 12- Practice

 Multiply each number by the target number and write your answer in the outer circle.



For more multiplication practice go to:http://www.snappymaths.com/multdiv/multdiv.htm



Year 6 – 6G

I can recall metric conversions.

Children in Year 6 should know the following facts. The aim is for them to recall these facts **instantly**.

1 kilogram = 1000 grams

1 kilometre = 1000 metres

1 metre = 100 centimetres

1 metre = 1000 millimetres

1 centimetre = 10 millimetres

1 litre = 1000 millilitres

They should also be able to apply these facts to answer questions.

e.g. How many metres in 1½ km?

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these key facts while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day.

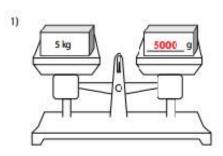
<u>Look at the prefixes</u> – Can your child work out the meanings of *kilo-, centi-* and *milli-*? What other words begin with these prefixes?

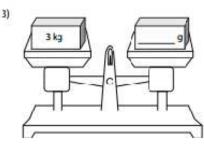
Be practical – Do some baking and convert the measurements in the recipe.

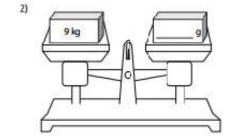
<u>How far?</u> – Calculate some distances using unusual measurements. How tall is your child in mm? How far away is London in metres?

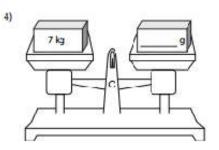
Metric conversions- Practice

Convert.









For more practice go to:-

Metric Conversion Game



Year 6 - 6H

I can recall square numbers up to 12² and their square roots.

Children in Year 6 should know the following facts. The aim is for them to recall these facts **instantly**.

$ ^2 = \times = $	= 1
$2^2 = 2 \times 2 = 4$	= 2
$3^2 = 3 \times 3 = 9$	= 3
$4^2 = 4 \times 4 = 16$	= 4
$5^2 = 5 \times 5 = 25$	= 5
$6^2 = 6 \times 6 = 36$	= 6
$7^2 = 7 \times 7 = 49$	= 7
$8^2 = 8 \times 8 = 64$	= 8
$9^2 = 9 \times 9 = 81$	= 9
$10^2 = 10 \times 10 = 100$	= 10
$ ^2 = \times = 2 $	= 11
$12^2 = 12 \times 12 = 144$	= 12

Key Vocabulary

What is 8 squared?

What is 7 multiplied by itself?

What is the **square root** of 144?

Is 81 a square number?

Children should also be able to recognise whether a number below 150 is a square number or not.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these key facts while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day.

<u>Cycling Squares</u> – At http://nrich.maths.org/1151 there is a challenge involving square numbers. Can you complete the challenge and then create your own examples?

<u>Use memory tricks</u> – For those hard-to-remember facts, www.multiplication.com has some strange picture stories to help children remember.

Squared number facts - Practice

Solve.

For More practice

visit:http://www.topmarks.co.uk/maths-games/hit-the-button



Year 6 - 61

I can identify prime numbers up to 50.

Children in Year 6 should know the following facts. The aim is for them to recall these facts **instantly**.

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, 23, 27, 29, 31, 37, 41, 43, 47

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, 22, 24, 25, 26, 27, 28, 30, 32, 34, 35, 36,

38, 39, 40, 42, 44, 45, 46, 48, 49, 50

Key Vocabulary

prime number composite number factor

multiple

Children should be able to explain how they know that a number is composite.

E.g. 39 is composite because it is a multiple of 3 and 13.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these key facts while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day.

It's really important that your child uses mathematical vocabulary accurately. Choose a number between 2 and 50. How many correct statements can your child make about this number using the vocabulary above?

Make a set of cards for the numbers from 2 to 50. How quickly can your child sort these into prime and composite numbers? How many even prime numbers can they find? How many odd composite numbers?

Prime numbers to 50- Practice



Help the pirates find their secret island by following the path of prime numbers.

The first few moves have been done for you.



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

For more ideas visit:

Prime Numbers Game



Year 6 – 6J

I can identify common factors of a pair of numbers.

Children in Year 6 should know the following facts. The aim is for them to recall these facts **instantly**.

The factors of a number are all numbers which divide it with no remainder.

E.g. the factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24. The factors of 56 are 1, 2, 4, 7, 8, 14, 28 and 56.

The common factors of two numbers are the factors they share.

E.g. the common factors of 24 and 56 are 1, 2, 4 and 8.

The greatest common factor of 24 and 56 is 8.

Key Vocabulary

factor

common factor

multiple

greatest common factor

Children should be able to explain how they know that a number is a common factor.

E.g. 8 is a common factor of 24 and 56 because $24 = 8 \times 3$ and $56 = 8 \times 7$.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these key facts while walking to school or during a car journey? If your child is not yet confident with identifying factor pairs of a number, you may want to refer to the Year 5 Summer 2 sheet to practise this first.

There are many online games to practise finding the greatest common factor, for example: http://www.fun4thebrain.com/beyondfacts/gcfsketch.html

Choose two numbers. Take it in turns to name factors. Who can find the most?

Factor pairs- Practice

 List all of the factors for each number. Write 'Prime Number' for those numbers with factors of only 1 and themselves.

11. 10 = 12. 44 = _____

17. 22 =

21. 46 = _______

24. 3q =

31. 42 =

32. 34 =

For more ideas visit:

snappy maths



Year 6 - 6K

I can convert between decimals, fractions and percentages.

Children in Year 6 should know the following facts. The aim is for them to recall these facts **instantly**.

Fraction	Decimal	Percentage
1/2	0.5	50%
1 /3	0.33	33.33%
1 4	0.25	25%
<u>1</u> 5	0.2	20%
1/10	0.1	10%
1 20	0.05	5%
<u>4</u> 10	0.4	40%
<u>6</u> 10	0.6	60%
7 10	0.7	70%
<u>8</u> 10	0.8	80%
<u>9</u> 10	0.9	90%

Key Vocabulary

How many **tenths** is 0.8? How many **hundredths** is 0.12?

Write 0.75 as a **fraction**?

Write ¼ as a decimal?

Children should be able to convert between decimals and fractions for $\frac{1}{2}$, $\frac{1}{4}$, and any number of tenths and hundredths.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these key facts while walking to school or during a car journey? You don't need to practise them all at once: start with tenths before moving on to hundredths.

<u>Play games</u> - Make some cards with pairs of equivalent fractions and decimals. Use these to play the memory game or snap. Or make your own dominoes with fractions on one side and decimals on the other.

Fractions, Decimals & Percentages-Practice

· Complete the table...

Fractions	Decimal	Percentage	Fraction	Decimal	Percentage
<u>31</u> 100	0.31	31%	<u>52</u> 100		
<u>9</u> 100				0.79	
	0.80				11%
		92%	<u>7</u> 100		
<u>53</u> 100				0.67	
	0.59				64%
		43%	4 100		
<u>86</u> 100				0.25	
	0.93				95%
		45%	<u>17</u> 100		

For more practice go to:-

http://www.topmarks.co.uk/maths-games/7-11years/fractions-and-decimals

Multiplication Table Tracker

Х	0	1	2	3	4	5	6	7	8	9	10	11	12
0													
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													

Key

- √ recall instantly
- S uses a strategy
- target

For more multiplication practice go to:-

http://www.snappymaths.com/multdiv/multdiv.htm

www.worksheetworks.com

http://www.topmarks.co.uk/maths-

games/hit-the-button