Year 5 Home Learning Developing Fluency

Key Instant Recall Facts

Name: _____

Class: _____

Key Instant Recall Facts

Target Tracker

	I know…..	Instant Recall (date)		
5A	Number bonds to 100			
5B	x and ÷ by 4			
5C	x and ÷ by 8			
5D	x and ÷ by 3			
5E	Duration of time			
5F	How to tell the time			
5G	x and ÷ by 6			
5H	x and ÷ by 9 & 11			
5I	Decimal equivalents of fractions			
5J	x and ÷ by 7			
5K	x and ÷ single digits by 10, and 100			
5L	Decimal number bonds by 1 and 10			
5M	x and ÷ up to 12 x 12			
5N	Recall metric conversions			
5O	Prime numbers up to 20			
5P	Square numbers & square roots up to 12^2			
5Q	Factor pairs of a number			

Key Instant Recall Facts

Year 5 – 5A

TWO MILE ASH

I know number bonds to 100.

Children in Year 5 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 + ◯ = 100 or 100 – ◯ = 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.

Fact families- If your child knows one fact (e.g. 8 + 5 = 13), can they tell you the other three facts in the same fact family?
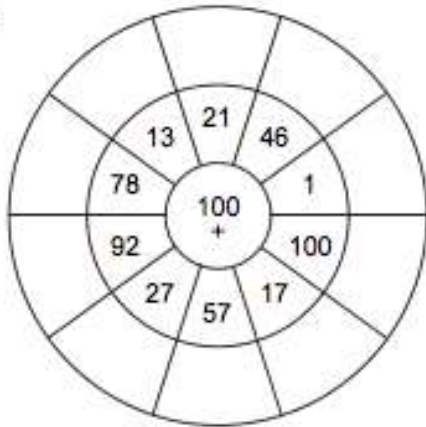
Use number bonds to 10 - How can number bonds to 10 help you work out number bonds to 100?

Play games – There are missing number questions at www.conkermaths.com . See how many questions you can answer in just 90 seconds. There is also a number bond pair game to play.
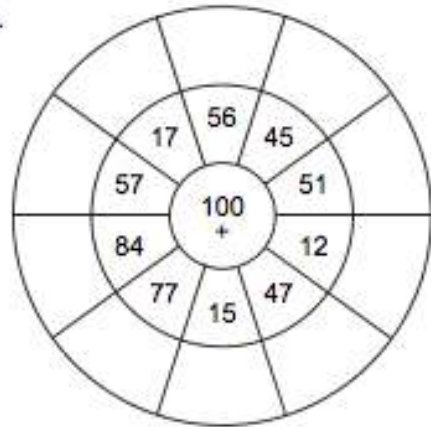
Make 100 - Practice

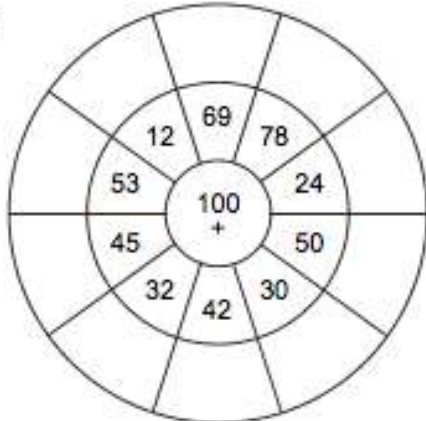◆ Place a number in the outer circle which adds with the number in the inner circle to make the target number.
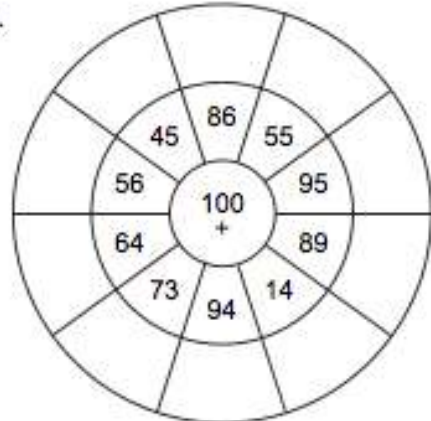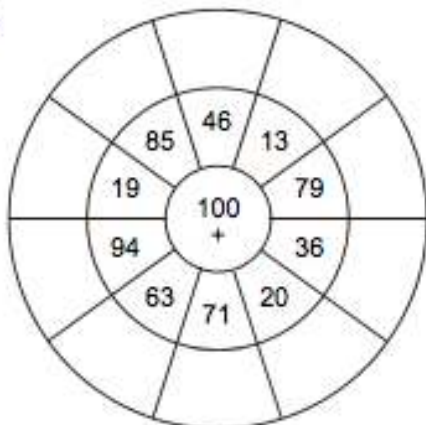
1.

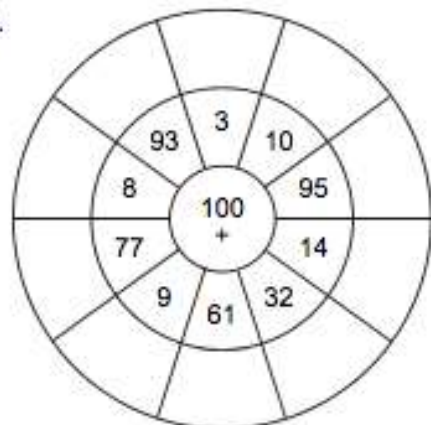| 13	21	46
78		1
	100 +	
92		100
27		17
	57	

2.

17	56	45
57		51
	100 +	
84		12
77		47
	15	

3.

12	69	78
53		24
	100 +	
45		50
32		30
	42	

4.

45	86	55
56		95
	100 +	
64		89
73		14
	94	

5.

85	46	13
19		79
	100 +	
94		36
63		20
	71	

6.

93	3	10
8		95
	100 +	
77		14
9		32
	61	

For more fun games see:
http://www.topmarks.co.uk/maths-games/hit-the-button

Key Instant Recall Facts

Year 5 – 5B

I know the multiplication and division facts for the 4 times table.

Children in Year 5 should know the following facts. The aim is for them to recall these facts **instantly**.

$4 \times 1 = 4$	$1 \times 4 = 4$	$4 \div 4 = 1$	$4 \div 1 = 4$
$4 \times 2 = 8$	$2 \times 4 = 8$	$8 \div 4 = 2$	$8 \div 2 = 4$
$4 \times 3 = 12$	$3 \times 4 = 12$	$12 \div 4 = 3$	$12 \div 3 = 4$
$4 \times 4 = 16$	$4 \times 4 = 16$	$16 \div 4 = 4$	$16 \div 4 = 4$
$4 \times 5 = 20$	$5 \times 4 = 20$	$20 \div 4 = 5$	$20 \div 5 = 4$
$4 \times 6 = 24$	$6 \times 4 = 24$	$24 \div 4 = 6$	$24 \div 6 = 4$
$4 \times 7 = 28$	$7 \times 4 = 28$	$28 \div 4 = 7$	$28 \div 7 = 4$
$4 \times 8 = 32$	$8 \times 4 = 32$	$32 \div 4 = 8$	$32 \div 8 = 4$
$4 \times 9 = 36$	$9 \times 4 = 36$	$36 \div 4 = 9$	$36 \div 9 = 4$
$4 \times 10 = 40$	$10 \times 4 = 40$	$40 \div 4 = 10$	$40 \div 10 = 4$
$4 \times 11 = 44$	$11 \times 4 = 44$	$44 \div 4 = 11$	$44 \div 11 = 4$
$4 \times 12 = 48$	$12 \times 4 = 48$	$48 \div 4 = 12$	$48 \div 12 = 4$

> **Key Vocabulary**
>
> What is 4 **multiplied by** 6?
>
> What is 8 **times** 4?
>
> What is 24 **divided by** 4?

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.

What do you already know? – Your child will already know many of these facts from the 2, 3, 5 and 10 times tables.

Double and double again – Multiplying a number by 4 is the same as doubling and doubling again. Double 6 is 12 and double 12 is 24, so $6 \times 4 = 24$.

Fact families– If your child knows one fact (e.g. $12 \times 4 = 48$), can they tell you the other three facts in the same fact family?

Multiplication by 4 - Practice

Mad Maths Minutes		Mad Maths Minutes	
4x Table / Division by 4 Mad Maths Minutes Set A		4x Table / Division by 4 Mad Maths Minutes Set B	
Multiplication	Related Division	Multiplication	Related Division
7 x 4 = _____ so	_____	1 x 4 = _____ so	_____
3 x 4 = _____ so	_____	11 x 4 = _____ so	_____
9 x 4 = _____ so	_____	3 x 4 = _____ so	_____
1 x 4 = _____ so	_____	8 x 4 = _____ so	_____
12 x 4 = _____ so	_____	5 x 4 = _____ so	_____
5 x 4 = _____ so	_____	10 x 4 = _____ so	_____
4 x 4 = _____ so	_____	6 x 4 = _____ so	_____
8 x 4 = _____ so	_____	9 x 4 = _____ so	_____
6 x 4 = _____ so	_____	2 x 4 = _____ so	_____
2 x 4 = _____ so	_____	4 x 4 = _____ so	_____
11 x 4 = _____ so	_____	7 x 4 = _____ so	_____
10 x 4 = _____ so	_____	12 x 4 = _____ so	_____

I know the multiplication and division facts for the 8 times table.

Children in Year 5 should know the following facts. The aim is for them to recall these facts **instantly**.

$8 \times 1 = 8$	$1 \times 8 = 8$	$8 \div 8 = 1$	$8 \div 1 = 8$
$8 \times 2 = 16$	$2 \times 8 = 16$	$16 \div 8 = 2$	$16 \div 2 = 8$
$8 \times 3 = 24$	$3 \times 8 = 24$	$24 \div 8 = 3$	$24 \div 3 = 8$
$8 \times 4 = 32$	$4 \times 8 = 32$	$32 \div 8 = 4$	$32 \div 4 = 8$
$8 \times 5 = 40$	$5 \times 8 = 40$	$40 \div 8 = 5$	$40 \div 5 = 8$
$8 \times 6 = 48$	$6 \times 8 = 48$	$48 \div 8 = 6$	$48 \div 6 = 8$
$8 \times 7 = 56$	$7 \times 8 = 56$	$56 \div 8 = 7$	$56 \div 7 = 8$
$8 \times 8 = 64$	$8 \times 8 = 64$	$64 \div 8 = 8$	$64 \div 8 = 8$
$8 \times 9 = 72$	$9 \times 8 = 72$	$72 \div 8 = 9$	$72 \div 9 = 8$
$8 \times 10 = 80$	$10 \times 8 = 80$	$80 \div 8 = 10$	$80 \div 10 = 8$
$8 \times 11 = 88$	$11 \times 8 = 88$	$88 \div 8 = 11$	$88 \div 11 = 8$
$8 \times 12 = 96$	$12 \times 8 = 96$	$96 \div 8 = 12$	$96 \div 12 = 8$

Key Vocabulary

What is 8 **multiplied by** 6?

What is 8 **times** 8?

What is 24 **divided by** 8?

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.

Songs and Chants – – Can you roll your numbers? "TMA, good as gold let me see your fingers roll the eights" You can also buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

Double your fours – Multiplying a number by 8 is the same as multiply by 4 and then doubling the answer. $8 \times 4 = 32$ and double 32 is 64, so $8 \times 8 = 64$.

Five six seven eight – fifty-six is seven times eight ($56 = 7 \times 8$).

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

Multiplication by 8 - Practice

Mad Maths Minutes		Mad Maths Minutes	
8x Table / Division by 8 Mad Maths Minutes Set A		8x Table / Division by 8 Mad Maths Minutes Set B	
Multiplication	Related Division	Multiplication	Related Division
1 x 8 = _____ so	_____	6 x 8 = _____ so	_____
2 x 8 = _____ so	_____	1 x 8 = _____ so	_____
9 x 8 = _____ so	_____	8 x 8 = _____ so	_____
4 x 8 = _____ so	_____	12 x 8 = _____ so	_____
7 x 8 = _____ so	_____	5 x 8 = _____ so	_____
10 x 8 = _____ so	_____	4 x 8 = _____ so	_____
12 x 8 = _____ so	_____	9 x 8 = _____ so	_____
11 x 8 = _____ so	_____	2 x 8 = _____ so	_____
3 x 8 = _____ so	_____	11 x 8 = _____ so	_____
5 x 8 = _____ so	_____	10 x 8 = _____ so	_____
6 x 8 = _____ so	_____	7 x 8 = _____ so	_____
8 x 8 = _____ so	_____	3 x 8 = _____ so	_____

Key Instant Recall Facts

Year 5 – 5D

I know the multiplication and division facts for the 3 times table.

Children in Year 5 should know the following facts. The aim is for them to recall these facts **instantly**.

3 × 1 = 3	1 × 3 = 3	3 ÷ 3 = 1	3 ÷ 1 = 3
3 × 2 = 6	2 × 3 = 6	6 ÷ 3 = 2	6 ÷ 2 = 3
3 × 3 = 9	3 × 3 = 9	9 ÷ 3 = 3	9 ÷ 3 = 3
3 × 4 = 12	4 × 3 = 12	12 ÷ 3 = 4	12 ÷ 4 = 3
3 × 5 = 15	5 × 3 = 15	15 ÷ 3 = 5	15 ÷ 5 = 3
3 × 6 = 18	6 × 3 = 18	18 ÷ 3 = 6	18 ÷ 6 = 3
3 × 7 = 21	7 × 3 = 21	21 ÷ 3 = 7	21 ÷ 7 = 3
3 × 8 = 24	8 × 3 = 24	24 ÷ 3 = 8	24 ÷ 8 = 3
3 × 9 = 27	9 × 3 = 27	27 ÷ 3 = 9	27 ÷ 9 = 3
3 × 10 = 30	10 × 3 = 30	30 ÷ 3 = 10	30 ÷ 10 = 3
3 × 11 = 33	11 × 3 = 33	33 ÷ 3 = 11	33 ÷ 11 = 3
3 × 12 = 36	12 × 3 = 36	36 ÷ 3 = 12	36 ÷ 12 = 3

Key Vocabulary

What is 3 **multiplied by** 8?

What is 8 **times** 3?

What is 24 **divided by** 3?

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.

Songs and Chants – Can you roll your numbers? "TMA, good as gold let me see your fingers roll the threes" You can also buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

Fact families– If your child knows one fact (e.g. 3 × 5 = 15), can they tell you the other three facts in the same fact family?

Warning! – When creating fact families, children sometimes get confused by the order of the numbers in the division number sentence. It is tempting to say that the biggest number goes first, but it is more helpful to say that the answer to the multiplication goes first, as this will help your child more in later years when they study fractions, decimals and algebra.
E.g. 3 × 12 = 36. The answer to the multiplication is 36, so 36 ÷ 3 = 12 and 36 ÷ 12 = 3

Multiplication by 3- Practice

Multiplication	Related Division
8 x 3 = ____ so _____	
1 x 3 = ____ so _____	
12 x 3 = ____ so _____	
9 x 3 = ____ so _____	
10 x 3 = ____ so _____	
7 x 3 = ____ so _____	
2 x 3 = ____ so _____	
3 x 3 = ____ so _____	
6 x 3 = ____ so _____	
4 x 3 = ____ so _____	
5 x 3 = ____ so _____	
11 x 3 = ____ so _____	

Multiplication	Related Division
11 x 3 = ____ so _____	
2 x 3 = ____ so _____	
9 x 3 = ____ so _____	
7 x 3 = ____ so _____	
8 x 3 = ____ so _____	
4 x 3 = ____ so _____	
3 x 3 = ____ so _____	
10 x 3 = ____ so _____	
6 x 3 = ____ so _____	
5 x 3 = ____ so _____	
1 x 3 = ____ so _____	
12 x 3 = ____ so _____	

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

Key Instant Recall Facts

Year 5 – 5E

I can recall facts about durations of time.

Children in Year 5 should know the following facts. The aim is for them to recall these facts **instantly**.

There are 60 seconds in a minute.
There are 60 minutes in an hour.
There are 24 hours in a day.
There are 7 days in a week.
There are 12 months in a year.
There are 365 days in a year.
There are 366 days in a leap year.

Number of days in each month

January	31	July	31
February	28/29	August	31
March	31	September	30
April	30	October	31
May	31	November	30
June	30	December	31

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.

Use rhymes and memory games– 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.

Use calendars – 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.

How long is a minute? – 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 Minutes		Mad Maths Minutes	
Units of Time Set A		Units of Time Set B	
days in September	_____	days in May	_____
minutes in an hour	_____	seconds in a minute	_____
days in June	_____	days in a non-leap year	_____
years in a decade	_____	days in January	_____
days in a week	_____	hours in a day	_____
months in a year	_____	days in November	_____
days in July	_____	minutes in an hour	_____
days in March	_____	years in a decade	_____
seconds in a minute	_____	days in April	_____
days in a non-leap year	_____	days in a week	_____
hours in a day	_____	days in a leap year	_____
days in a leap year	_____	months in a year	_____

Key Instant Recall Facts

Year 5 – 5F

I can tell the time.

Children in Year 5 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
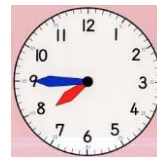
Top Tips

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

Talk about time - 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.
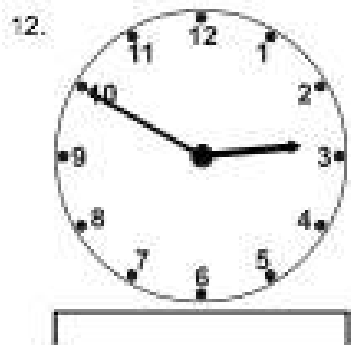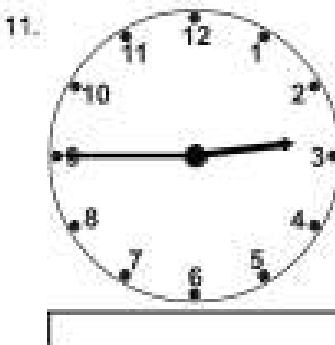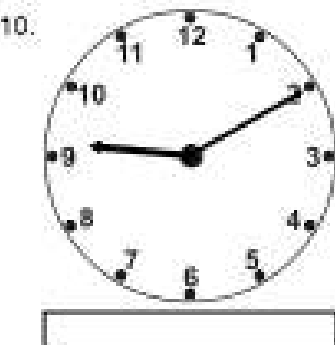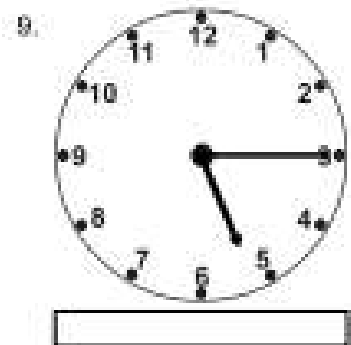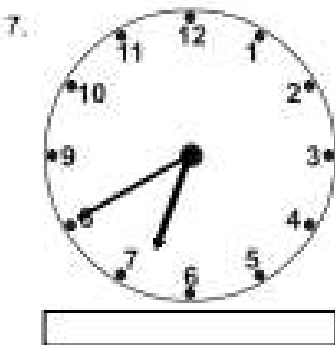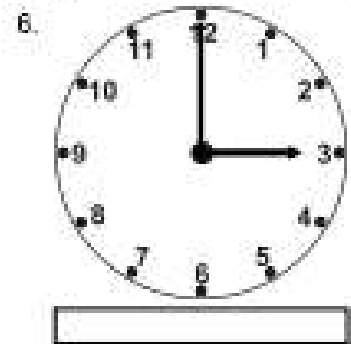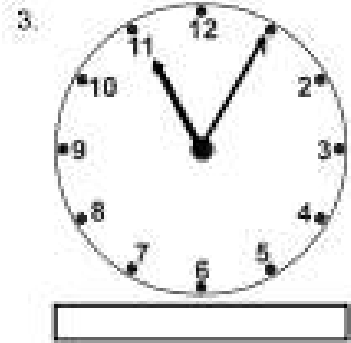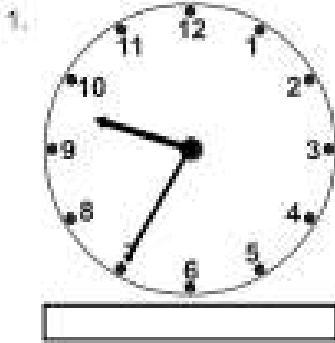
Ask your child the time regularly – You could also give your child some responsibility for watching the clock :
"The cakes need to come out of the oven at twenty-two minutes past four exactly."
"We need to leave the house at twenty-five to nine."

Telling the time- Practice

♦ Write the time shown on each clock...
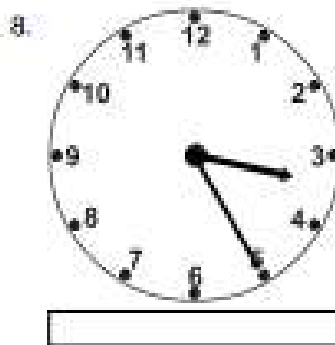
1.
[clock]

2.
[clock]

3.
[clock]

4.
[clock]

5.
[clock]

6.
[clock]

7.
[clock]

8.
[clock]

9.
[clock]

10.
[clock]

11.
[clock]

12.
[clock]

TWO MILE ASH

I know the multiplication and division facts for the 6 times table.

Children in Year 5 should know the following facts. The aim is for them to recall these facts **instantly**.

6 × 1 = 6	1 × 6 = 6	6 ÷ 6 = 1	6 ÷ 1 = 6
6 × 2 = 12	2 × 6 = 12	12 ÷ 6 = 2	12 ÷ 2 = 6
6 × 3 = 18	3 × 6 = 18	18 ÷ 6 = 3	18 ÷ 3 = 6
6 × 4 = 24	4 × 6 = 24	24 ÷ 6 = 4	24 ÷ 4 = 6
6 × 5 = 30	5 × 6 = 30	30 ÷ 6 = 5	30 ÷ 5 = 6
6 × 6 = 36	6 × 6 = 36	36 ÷ 6 = 6	36 ÷ 6 = 6
6 × 7 = 42	7 × 6 = 42	42 ÷ 6 = 7	42 ÷ 7 = 6
6 × 8 = 48	8 × 6 = 48	48 ÷ 6 = 8	48 ÷ 8 = 6
6 × 9 = 54	9 × 6 = 54	54 ÷ 6 = 9	54 ÷ 9 = 6
6 × 10 = 60	10 × 6 = 60	60 ÷ 6 = 10	60 ÷ 10 = 6
6 × 11 = 66	11 × 6 = 66	66 ÷ 6 = 11	66 ÷ 11 = 6
6 × 12 = 72	12 × 6 = 72	72 ÷ 6 = 12	72 ÷ 12 = 6

Key Vocabulary

What is 8 **multiplied by** 6?

What is 6 **times** 8?

What is 24 **divided by** 6?

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.

Songs and Chants – Can you roll your numbers? "TMA, good as gold let me see your fingers roll the sixes" You can also buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

Double your threes – Multiplying a number by 6 is the same as multiplying by 3 and then doubling the answer. 7 × 3 = 21 and double 21 is 42, so 7 × 6 = 42.

Fact families– If your child knows one fact (e.g. 3 × 6 = 18), can they tell you the other three facts in the same fact family?

Warning! – When creating fact families, children sometimes get confused by the order of the numbers in the division number sentence. It is tempting to say that the biggest number goes first, but it is more helpful to say that the answer to the multiplication goes first, as this will help your child more in later years when they study fractions, decimals and algebra.
E.g. 6 × 12 = 72. The answer to the multiplication is 72, so 72 ÷ 6 = 12 and 72 ÷ 12 = 6

Multiply by 6- Practice

Mad Maths Minutes		Mad Maths Minutes	
6x Table / Division by 6 Mad Maths Minutes Set A		6x Table / Division by 6 Mad Maths Minutes Set B	
Multiplication	Related Division	Multiplication	Related Division
2 x 6 = ____	so _____	12 x 6 = ____	so _____
6 x 6 = ____	so _____	1 x 6 = ____	so _____
11 x 6 = ____	so _____	9 x 6 = ____	so _____
10 x 6 = ____	so _____	3 x 6 = ____	so _____
7 x 6 = ____	so _____	6 x 6 = ____	so _____
1 x 6 = ____	so _____	5 x 6 = ____	so _____
3 x 6 = ____	so _____	10 x 6 = ____	so _____
4 x 6 = ____	so _____	8 x 6 = ____	so _____
9 x 6 = ____	so _____	7 x 6 = ____	so _____
5 x 6 = ____	so _____	11 x 6 = ____	so _____
8 x 6 = ____	so _____	4 x 6 = ____	so _____
12 x 6 = ____	so _____	2 x 6 = ____	so _____

Key Instant Recall Facts

Year 5 – 5H

I know the multiplication and division facts for the 9 and 11 times tables.

Children in Year 5 should know the following facts. The aim is for them to recall these facts **instantly**.

$9 \times 1 = 9$	$9 \div 9 = 1$	$11 \times 1 = 11$	$11 \div 11 = 1$
$9 \times 2 = 18$	$18 \div 9 = 2$	$11 \times 2 = 22$	$22 \div 11 = 2$
$9 \times 3 = 27$	$27 \div 9 = 3$	$11 \times 3 = 33$	$33 \div 11 = 3$
$9 \times 4 = 36$	$36 \div 9 = 4$	$11 \times 4 = 44$	$44 \div 11 = 4$
$9 \times 5 = 45$	$45 \div 9 = 5$	$11 \times 5 = 55$	$55 \div 11 = 5$
$9 \times 6 = 54$	$54 \div 9 = 6$	$11 \times 6 = 66$	$66 \div 11 = 6$
$9 \times 7 = 63$	$63 \div 9 = 7$	$11 \times 7 = 77$	$77 \div 11 = 7$
$9 \times 8 = 72$	$72 \div 9 = 8$	$11 \times 8 = 88$	$88 \div 11 = 8$
$9 \times 9 = 81$	$81 \div 9 = 9$	$11 \times 9 = 99$	$99 \div 11 = 9$
$9 \times 10 = 90$	$90 \div 9 = 10$	$11 \times 10 = 110$	$110 \div 11 = 10$
$9 \times 11 = 99$	$99 \div 9 = 11$	$11 \times 11 = 121$	$121 \div 11 = 11$
$9 \times 12 = 108$	$108 \div 9 = 12$	$11 \times 12 = 132$	$132 \div 11 = 12$

Key Vocabulary

What is 8 **multiplied by** 6?

What is 6 **times** 8?

What is 24 **divided by** 6?

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.

Look for patterns – These times tables are full of patterns for your child to find. How many can they spot?

Use your ten times table – Multiply a number by 10 and subtract the original number (e.g. $7 \times 10 - 7 = 70 - 7 = 63$). What do you notice?
What happens if you add your original number instead?
(e.g. $7 \times 10 + 7 = 70 + 7 = 77$)

What do you already know? – Your child will already know many of these facts from the 2, 3, 4, 5, 6, 8 and 10 times tables. It might be worth practising these again!

Multiply by 9 & 11- Practice

Multiply by 9, using x 10 to help you.

Now try it with larger numbers, but for each
one I'd like you to write the inverse operation
too.

For example: $13 \times 9 = 117$
$117 \div 9 = 13$

```
6 x 9
6 x 10 = 60
        - 6
        ____
         54

So, 6 x 9 = 54
```

1) 15×9	2) 18×9	3) 23×9	4) 26×9
5) 28×9	6) 32×9	7) 35×9	8) 39×9

We can also use x 10 to help us multiply by 11.
Try multiply these numbers by 11 and remember to
Write the inverse operation.

For example: $14 \times 11 = 154$
$154 \div 11 = 14$

```
6 x 11
6 x 10 = 60
        + 6
        ____
         66

So, 6 x 11 = 66
```

9) 16×11	9) 18×11	10) 22×11	11) 25×11
12) 29×11	13) 33×11	14) 36×11	15) 41×11

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

I can recognise decimal equivalents of fractions.

Children in Year 5 should know the following facts. The aim is for them to recall these facts **instantly**.

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

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

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

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

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

> **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 ½, ¼, ¾ and any number of tenths and hundredths.
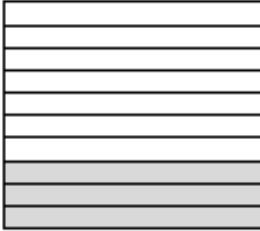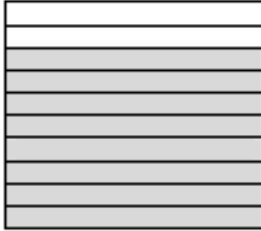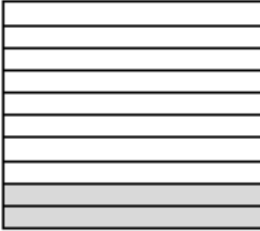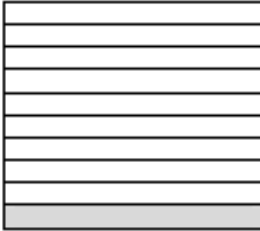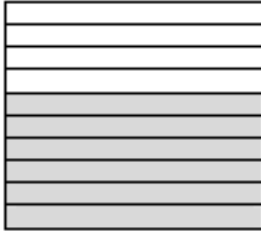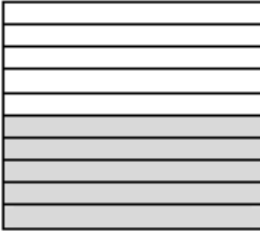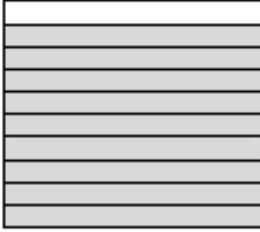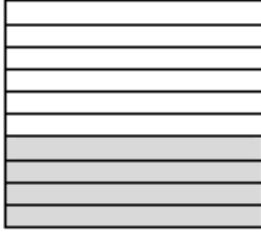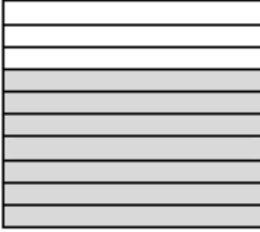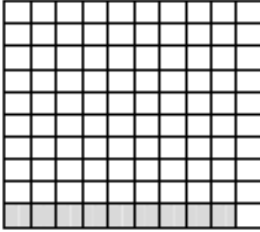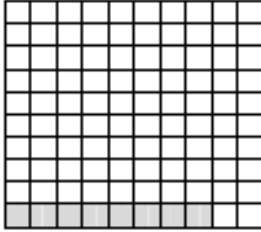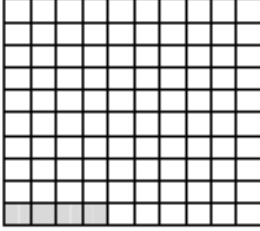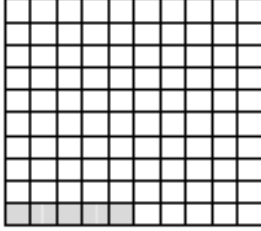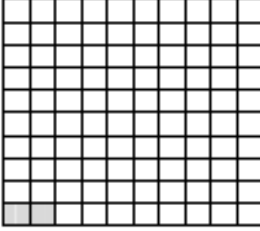
Top Tips

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.

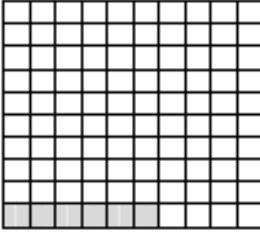Play games - Make some cards with pairs of equivalent fractions and decimals. Use these to play the memory game or snap. Or make your own dominoes with fractions on one side and decimals on the other.

Decimal equivalents of fractions- Practice

- Write as decimals...

$\frac{3}{10}$ **0.3**	$\frac{8}{10}$ ☐	$\frac{2}{10}$ ☐	
$\frac{1}{10}$ ☐	$\frac{6}{10}$ ☐	$\frac{5}{10}$ ☐	
$\frac{9}{10}$ ☐	$\frac{4}{10}$ ☐	$\frac{7}{10}$ ☐	
$\frac{9}{100}$ **0.09**	$\frac{8}{100}$ ☐	$\frac{6}{100}$ ☐	
$\frac{4}{100}$ ☐	$\frac{5}{100}$ ☐	$\frac{2}{100}$ ☐	

For more practice go to:-
http://www.topmarks.co.uk/maths-games/7-11-years/fractions-and-decimals

Key Instant Recall Facts

Year 5 – 5J

I know the multiplication and division facts for the 7 times table.

Children in Year 5 should know the following facts. The aim is for them to recall these facts **instantly**.

$7 \times 1 = 7$	$1 \times 7 = 7$	$7 \div 7 = 1$	$7 \div 1 = 7$
$7 \times 2 = 14$	$2 \times 7 = 14$	$14 \div 7 = 2$	$14 \div 2 = 7$
$7 \times 3 = 21$	$3 \times 7 = 21$	$21 \div 7 = 3$	$21 \div 3 = 7$
$7 \times 4 = 28$	$4 \times 7 = 28$	$28 \div 7 = 4$	$28 \div 4 = 7$
$7 \times 5 = 35$	$5 \times 7 = 35$	$35 \div 7 = 5$	$35 \div 5 = 7$
$7 \times 6 = 42$	$6 \times 7 = 42$	$42 \div 7 = 6$	$42 \div 6 = 7$
$7 \times 7 = 49$	$7 \times 7 = 49$	$49 \div 7 = 7$	$49 \div 7 = 7$
$7 \times 8 = 56$	$8 \times 7 = 56$	$56 \div 7 = 8$	$56 \div 8 = 7$
$7 \times 9 = 63$	$9 \times 7 = 63$	$63 \div 7 = 9$	$63 \div 9 = 7$
$7 \times 10 = 70$	$10 \times 7 = 70$	$70 \div 7 = 10$	$70 \div 10 = 7$
$7 \times 11 = 77$	$11 \times 7 = 77$	$77 \div 7 = 11$	$77 \div 11 = 7$
$7 \times 12 = 84$	$12 \times 7 = 84$	$84 \div 7 = 12$	$84 \div 12 = 7$

Key Vocabulary

What is 7 **multiplied by** 6?

What is 7 **times** 8?

What is 84 **divided by** 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.

Songs and Chants – Can you roll your numbers? "TMA good as gold let me see your fingers roll the sevens" You can also buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

Order of difficulty – Ask your child to order these facts from the easiest to the most challenging. Can they explain why some facts are easier to remember? Then focus on practising the most challenging facts.

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

Multiply by 7- Practice

Mad Maths Minutes		Mad Maths Minutes	
7x Table / Division by 7 Mad Maths Minutes Set A		7x Table / Division by 7 Mad Maths Minutes Set B	
Multiplication	Related Division	Multiplication	Related Division
8 x 7 = _____ so	_____	4 x 7 = _____ so	_____
2 x 7 = _____ so	_____	10 x 7 = _____ so	_____
9 x 7 = _____ so	_____	7 x 7 = _____ so	_____
10 x 7 = _____ so	_____	8 x 7 = _____ so	_____
4 x 7 = _____ so	_____	11 x 7 = _____ so	_____
3 x 7 = _____ so	_____	2 x 7 = _____ so	_____
5 x 7 = _____ so	_____	6 x 7 = _____ so	_____
7 x 7 = _____ so	_____	1 x 7 = _____ so	_____
1 x 7 = _____ so	_____	12 x 7 = _____ so	_____
11 x 7 = _____ so	_____	3 x 7 = _____ so	_____
12 x 7 = _____ so	_____	9 x 7 = _____ so	_____
6 x 7 = _____ so	_____	5 x 7 = _____ so	_____

Key Instant Recall Facts

Year 5 – 5K

I can multiply and divide single-digit numbers by 10 and 100.

Children in Year 5 should know the following facts. The aim is for them to recall these facts **instantly**.

$7 \times 10 = 70$	$30 \times 10 = 300$	$0.8 \times 10 = 8$
$10 \times 7 = 70$	$10 \times 30 = 300$	$10 \times 0.8 = 8$
$70 \div 7 = 10$	$300 \div 30 = 10$	$8 \div 0.8 = 10$
$70 \div 10 = 7$	$300 \div 10 = 30$	$8 \div 10 = 0.8$
$6 \times 100 = 600$	$40 \times 100 = 4000$	$0.2 \times 10 = 2$
$100 \times 6 = 600$	$100 \times 40 = 4000$	$10 \times 0.2 = 2$
$600 \div 6 = 100$	$4000 \div 40 = 100$	$2 \div 0.2 = 10$
$600 \div 100 = 6$	$4000 \div 100 = 40$	$2 \div 10 = 0.2$

Key Vocabulary

What is 5 **multiplied by** 10?

What is 10 **times** 0.9?

What is 700 **divided by** 70?

hundreds, tens, units

tenths, hundredths

These are just examples of the facts for this term. Children should be able to answer these questions in any order, including missing number questions e.g. $10 \times \bigcirc = 5$ or $\bigcirc \div 10 = 60$.

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.

Look for patterns – These times tables are full of patterns for your child to find. How many can they spot?

Multiply & Divide by 10, 100- Practice

- Complete the table...

Division	Fraction	Decimal
31 ÷ 100	$\frac{31}{100}$	0.31
13 ÷ 100		
43 ÷ 100		
42 ÷ 100		
12 ÷ 100		
88 ÷ 100		
62 ÷ 100		
51 ÷100		
96 ÷ 100		
28 ÷ 100		

Division	Fraction	Decimal
55 ÷ 100		
25 ÷ 100		
53 ÷ 100		
52 ÷ 100		
85 ÷ 100		
75 ÷ 100		
78 ÷ 100		
64 ÷ 100		
66 ÷ 100		
34 ÷ 100		

For more practice visit:
http://www.greatmathsteachingideas.com/wp-content/uploads/2012/02/Multiplying-and-dividing-by-10-100-and-1000.pdf
http://www.taw.org.uk/lic/itp/itps/moving_digits_08.swf

TWO MILE ASH

I know decimal number bonds to 1 and 10.

Children in Year 5 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 + ◯ = 10 or 7.2 + ◯ = 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.

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

Use number bonds to 10 - How can number bonds to 10 help you work out number bonds to 100?

Play games – There are missing number questions at www.conkermaths.com . 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 1- Practice

Mad Maths Minutes		Mad Maths Minutes	
Make 1 (decimals – 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

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

Children in Year 5 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 5 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 × ◯ = 28 or ◯ ÷ 6 = 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.
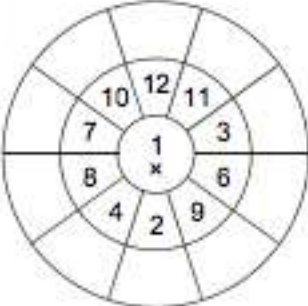
Speed Challenge – Take two packs of playing cards and remove the kings. Turn over two cards and ask your child to multiply the numbers together (Ace = 1, Jack = 11, Queen = 12). How many questions can they answer correctly in 2 minutes? Practise regularly and see if they can beat their high score.
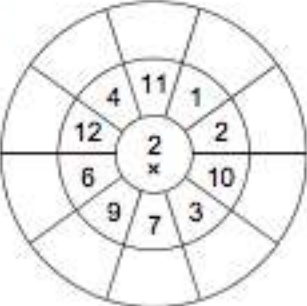
Online games – There are many games online which can help children practise their multiplication and division facts. www.conkermaths.org is a good place to start.
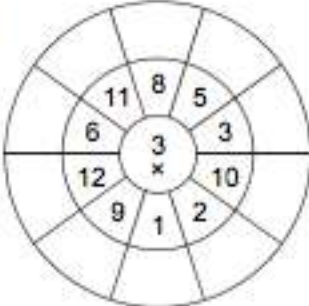
Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some strange picture stories to help children remember.
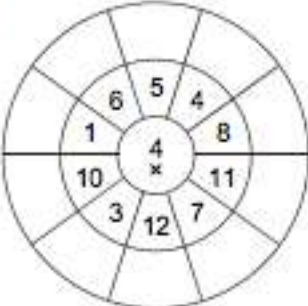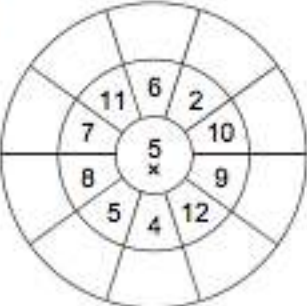
Multiply up to 12 x 12- Practice

♦ Multiply each number by the target number and write your answer in the outer circle.
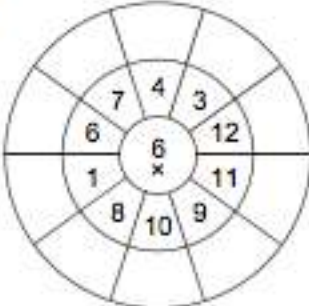
1.

Center: 1 ×
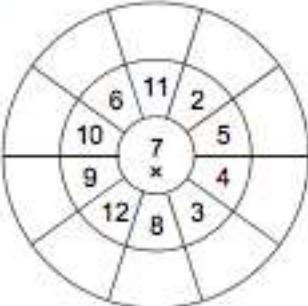Inner ring: 10, 12, 11, 7, 3, 8, 6, 4, 2, 9
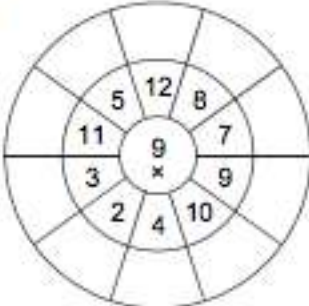
2.

Center: 2 ×
Inner ring: 4, 11, 1, 12, 2, 6, 10, 9, 7, 3

3.

Center: 3 ×
Inner ring: 11, 8, 5, 6, 3, 12, 10, 9, 1, 2

4.

Center: 4 ×
Inner ring: 6, 5, 4, 1, 8, 10, 11, 3, 12, 7

5.

Center: 5 ×
Inner ring: 11, 6, 2, 7, 10, 8, 9, 5, 4, 12

6.

Center: 6 ×
Inner ring: 7, 4, 3, 6, 12, 1, 11, 8, 10, 9

7.

Center: 7 ×
Inner ring: 6, 11, 2, 10, 5, 9, 4, 12, 8, 3

8.

Center: 8 ×
Inner ring: 12, 10, 1, 11, 6, 4, 2, 9, 3, 7

9.

Center: 9 ×
Inner ring: 5, 12, 8, 11, 7, 3, 9, 2, 4, 10

10.

Center: 10 ×
Inner ring: 11, 12, 1, 8, 5, 10, 3, 4, 6, 9

11.

Center: 11 ×
Inner ring: 1, 10, 7, 11, 5, 12, 8, 4, 3, 6

12.

Center: 12 ×
Inner ring: 3, 12, 2, 4, 6, 10, 11, 1, 5, 9
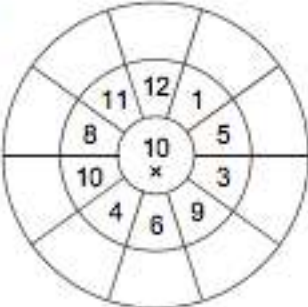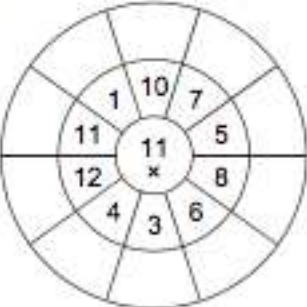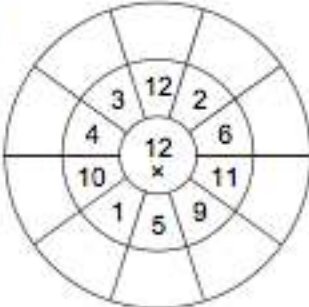
Key Instant Recall Facts

Year 5 – 5N

I can recall metric conversions.

Children in Year 5 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.

Look at the prefixes – 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.

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

Metric conversions- Practice

Convert.

1 a. 1,360 ml = _____ L _____ ml   1 b. 3 L 140 ml = _____ ml

2 a. 209 mm = _____ cm _____ mm   2 b. 8,870 g = _____ kg _____ g

3 a. 7,720 g = _____ kg _____ g   3 b. 3,260 m = _____ km _____ m

4 a. 5 m 81 cm = _____ cm   4 b. 4 m 81 cm = _____ cm

5 a. 4,430 g = _____ kg _____ g   5 b. 9,560 m = _____ km _____ m

6 a. 8 kg 780 g = _____ g   6 b. 4,410 ml = _____ L _____ ml

7 a. 5 L 610 ml = _____ ml   7 b. 6 kg 350 g = _____ g

8 a. 1 L 140 ml = _____ ml   8 b. 1 L 870 ml = _____ ml

9 a. 9,250 ml = _____ L _____ ml   9 b. 9,760 ml = _____ L _____ ml

10 a. 8 kg 810 g = _____ g   10 b. 2 kg 440 g = _____ g

1)
5 kg   5000 g

2)
9 kg   ___ g

3)
3 kg   ___ g

4)
7 kg   ___ g
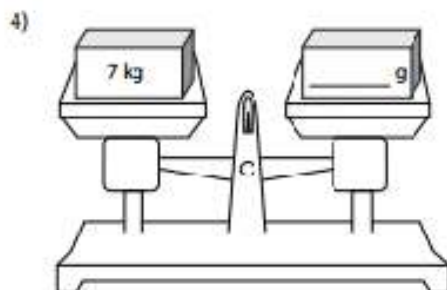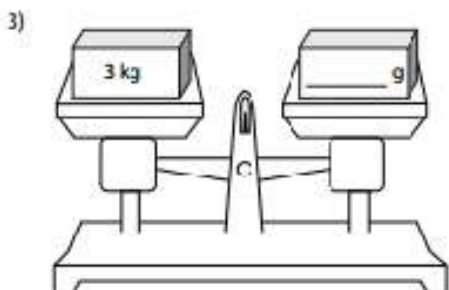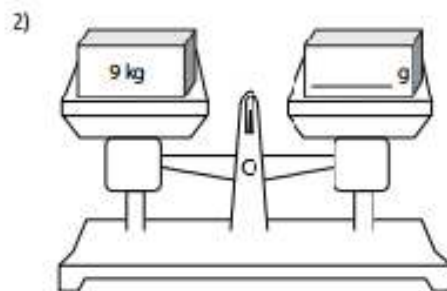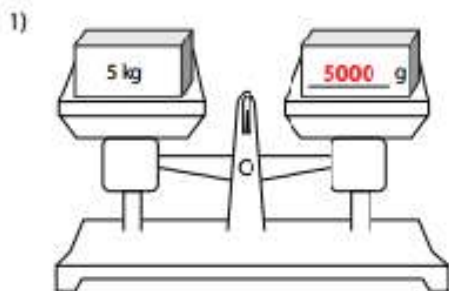
For more practice go to:-
Metric Conversion Game

I can identify prime numbers up to 20.

Children in Year 5 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

Key Vocabulary
prime number
composite number
factor
multiple

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

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

E.g. 15 is composite because it is a multiple of 3 and 5.

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 20. 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 20. 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 20- Practice

Prime or Composite 1-20 Worksheet

Is 20 prime or composite?

_____

Is 7 prime or composite?

_____

Is 9 prime or composite?

_____

Is 5 prime or composite?

_____

Is 2 prime or composite?

_____

Is 16 prime or composite?

_____

Is 1 prime or composite?

_____

Is 6 prime or composite?

_____

Is 14 prime or composite?

_____

Is 11 prime or composite?

_____

Is 8 prime or composite?

_____

Is 10 prime or composite?

_____

Is 19 prime or composite?

_____

Is 3 prime or composite?

_____

Is 18 prime or composite?

_____

Is 17 prime or composite?

_____

Is 4 prime or composite?

_____

Is 13 prime or composite?

_____

Is 15 prime or composite?

_____

Is 12 prime or composite?

_____

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

Key Instant Recall Facts

Year 5 – 5P

I can recall square numbers up to 12^2 and their square roots.

Children in Year 5 should know the following facts. The aim is for them to recall these facts **instantly**.

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

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.

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

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

Use the square numbers fact sheet to help you understand square numbers.

Calculate the following:

1) $2^2 = $ _____

2) $5^2 = $ _____

3) $10^2 = $ _____

4) $6^2 = $ _____

5) $7^2 = $ _____

6) $11^2 = $ _____

7) $4^2 = $ _____

8) $9^2 = $ _____

9) $12^2 = $ _____

Work out the following:

10) $2^2 + 3^2 = $ _____

11) $6^2 - 4^2 = $ _____

12) $2^2 \times 3^2 = $ _____

13) $2^2 \times 6^2 = $ _____

14) $9^2 \div 3^2 = $ _____

15) $10^2 + 6^2 = $ _____

16) $11^2 - 9^2 = $ _____

17) $12^2 - 6^2 = $ _____

18) $8^2 + 4^2 = $ _____

19) $5^2 - 2^2 = $ _____

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

TWO MILE ASH

I can find factor pairs of a number.

Children in Year 5 should know the following facts. The aim is for them to recall these facts **instantly**.

Children should now know all multiplication and division facts up to 12 × 12. When given a number in one of these times tables, they should be able to state a factor pair which multiply to make this number. Below are some examples:

24 = 4 × 6
24 = 8 × 3
56 = 7 × 8
54 = 9 × 6

42 = 6 × 7
25 = 5 × 5
84 = 7 × 12
15 = 5 × 3

> **Key Vocabulary**
>
> Can you find a **factor** of 28?
>
> Find two numbers whose **product** is 20.
>
> I know that 6 is a factor of 72 because 6 multiplied by 12 equals 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.

Play games - There is an activity at www.conkermaths.org to practise finding factor pairs

Think of the question – One player thinks of a times table question (e.g. 4 × 12) and states the answer. The other player has to guess the original question.

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

Factor pairs- Practice

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

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

For more challenges visit:
http://nrich.maths.org/5468/note

Multiplication Table Tracker

X	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
http://www.mathworksheets4kids.com/
http://www.math-drills.com/
http://www.mathwire.com/