To help develop children’s fluency in mathematics, we ask them to learn Key Instant Recall Facts each half term. We expect children to practise their KIRFs at least 3 times a week.

I have created these lists of KIRFs to align with the new curriculum. They are intended to be challenging and it is intended that children will be taught the necessary maths in lessons beforehand.

This is a first draft so is a long way from perfect. In particular, some ‘top tips’ are well-thought out and others are currently more-or-less empty.

If you have any questions or further suggestions, please let me know.

Thanks.

Marie
Key Instant Recall Facts
Year 1 – Autumn 2

I know number bonds for each number to 6.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

0 + 1 = 1 0 + 4 = 4 0 + 6 = 6
1 + 0 = 1 1 + 3 = 4 1 + 5 = 6
2 + 2 = 4 2 + 4 = 6
0 + 2 = 2 3 + 1 = 4 3 + 3 = 6
1 + 1 = 2 4 + 0 = 4 4 + 2 = 6
2 + 0 = 2 5 + 1 = 6
0 + 5 = 5 6 + 0 = 6
0 + 3 = 3 1 + 4 = 5
1 + 2 = 3 2 + 3 = 5
2 + 1 = 3 3 + 2 = 5
3 + 0 = 3 4 + 1 = 5
5 + 0 = 5

They should be able to answer these questions in any order, including missing number questions e.g. 3 + ⃝ = 5 or 4 – ⃝ = 2.

Key Vocabulary
What is 3 add 2?
What is 2 plus 2?
What is 5 take away 2?
What is 1 less than 4?

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

Use practical resources – Your child has one potato on their plate and you give them three more. Can they predict how many they will have now?

Make a poster – We use Numicon at school. You can find pictures of the Numicon shapes here: bit.ly/NumiconPictures – your child could make a poster showing the different ways of making 5.

Play games – You can play number bond pairs online at www.conkermaths.com and then see how many questions you can answer in just one minute.
I know doubles and halves of numbers to 10.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

- \( 0 + 0 = 0 \)
- \( 1 + 1 = 1 \)
- \( 2 + 2 = 4 \)
- \( 3 + 3 = 6 \)
- \( 4 + 4 = 8 \)
- \( 5 + 5 = 10 \)
- \( 6 + 6 = 12 \)
- \( 7 + 7 = 14 \)
- \( 8 + 8 = 16 \)
- \( 9 + 9 = 18 \)
- \( 10 + 10 = 20 \)

### Key Vocabulary

- What is double 9?
- What is half of 6?

### Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**Ping Pong** – In this game, the parent says, “Ping,” and the child replies, “Pong.” Then the parent says a number and the child doubles it. For a harder version, the adult can say, “Pong.” The child replies, “Ping,” and then halves the next number given.

**Practise online** – Go to [www.conkermaths.com](http://www.conkermaths.com) and see how many questions you can answer in just 90 seconds.
Key Instant Recall Facts

Year 1 – Spring 2

I know number bonds to 10.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

<table>
<thead>
<tr>
<th>Equation</th>
<th>Equation</th>
<th>Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 + 10 = 10</td>
<td>2 + 8 = 10</td>
<td>4 + 6 = 10</td>
</tr>
<tr>
<td>10 + 0 = 10</td>
<td>8 + 2 = 10</td>
<td>6 + 4 = 10</td>
</tr>
<tr>
<td>10 – 10 = 0</td>
<td>10 – 8 = 2</td>
<td>10 – 6 = 4</td>
</tr>
<tr>
<td>10 – 0 = 10</td>
<td>10 – 2 = 8</td>
<td>10 – 4 = 6</td>
</tr>
<tr>
<td>1 + 9 = 10</td>
<td>3 + 7 = 10</td>
<td>5 + 5 = 10</td>
</tr>
<tr>
<td>9 + 1 = 10</td>
<td>7 + 3 = 10</td>
<td>10 – 5 = 5</td>
</tr>
<tr>
<td>10 – 9 = 1</td>
<td>10 – 7 = 3</td>
<td></td>
</tr>
<tr>
<td>10 – 1 = 9</td>
<td>10 – 3 = 7</td>
<td></td>
</tr>
</tbody>
</table>

Key Vocabulary

What is 3 add 2?
What is 2 plus 2?
What is 5 take away 2?
What is 1 less than 4?

They should be able to answer these questions in any order, including missing number questions e.g. 6 + ∈ = 10 or 10 – ∈ = 3.

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

Use practical resources – Your child has one potato on their plate and you give them two more. Can they predict how many they will have now?

Make a poster – We use Numicon at school. You can find pictures of the Numicon shapes here: bit.ly/NumiconPictures – your child could make a poster showing the different ways of making 5.

Play games – You can play number bond pairs online at www.conkermaths.com and then see how many questions you can answer in just one minute.
I can tell the time.

By the end of this half term, children 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.

Top Tips

The secret to success is practising little and often. If you would like more ideas, please speak to your child’s teacher.

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.

Play “What’s the time Mr Wolf?” – You could also give your child some responsibility for watching the clock.

Read books about time
Key Instant Recall Facts
Year 1 – Summer 2

I know number bonds for each number to 10.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

<table>
<thead>
<tr>
<th></th>
<th>0 + 7 = 7</th>
<th>0 + 8 = 8</th>
<th>0 + 9 = 9</th>
<th>0 + 10 = 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 + 6 = 7</td>
<td>1 + 7 = 8</td>
<td>1 + 8 = 9</td>
<td>1 + 9 = 10</td>
<td></td>
</tr>
<tr>
<td>2 + 5 = 7</td>
<td>2 + 6 = 8</td>
<td>2 + 7 = 9</td>
<td>2 + 8 = 10</td>
<td></td>
</tr>
<tr>
<td>3 + 4 = 7</td>
<td>3 + 5 = 8</td>
<td>3 + 6 = 9</td>
<td>3 + 7 = 10</td>
<td></td>
</tr>
<tr>
<td>4 + 3 = 7</td>
<td>4 + 4 = 8</td>
<td>4 + 5 = 9</td>
<td>4 + 6 = 10</td>
<td></td>
</tr>
<tr>
<td>5 + 2 = 7</td>
<td>5 + 3 = 8</td>
<td>5 + 4 = 9</td>
<td>5 + 5 = 10</td>
<td></td>
</tr>
<tr>
<td>6 + 2 = 8</td>
<td>6 + 2 = 8</td>
<td>6 + 3 = 9</td>
<td>6 + 4 = 10</td>
<td></td>
</tr>
<tr>
<td>7 + 1 = 8</td>
<td>7 + 1 = 8</td>
<td>7 + 2 = 9</td>
<td>7 + 3 = 10</td>
<td></td>
</tr>
<tr>
<td>8 + 0 = 8</td>
<td>8 + 0 = 8</td>
<td>8 + 1 = 9</td>
<td>8 + 2 = 10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9 + 0 = 9</td>
<td>9 + 1 = 10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 + 0 = 10</td>
<td></td>
</tr>
</tbody>
</table>

Key Vocabulary
What do I add to 5 to make 10?
What is 10 take away 6?
What is 3 less than 10?
How many more than 2 is 10?

They should be able to answer these questions in any order, including missing number questions e.g. $1 + \bigcirc = 10$ or $9 - \bigcirc = 8$.

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.
Key Instant Recall Facts
Year 2 – Autumn 1

I know number bonds to 20.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 + 20 = 20</td>
<td>20 + 0 = 20</td>
<td>20 – 0 = 20</td>
<td>20 – 20 = 0</td>
<td></td>
</tr>
<tr>
<td>1 + 19 = 20</td>
<td>19 + 1 = 20</td>
<td>20 – 1 = 19</td>
<td>20 – 19 = 1</td>
<td></td>
</tr>
<tr>
<td>2 + 18 = 20</td>
<td>18 + 2 = 20</td>
<td>20 – 2 = 18</td>
<td>20 – 18 = 2</td>
<td></td>
</tr>
<tr>
<td>3 + 17 = 20</td>
<td>17 + 3 = 20</td>
<td>20 – 3 = 17</td>
<td>20 – 17 = 3</td>
<td></td>
</tr>
<tr>
<td>4 + 16 = 20</td>
<td>16 + 4 = 20</td>
<td>20 – 4 = 16</td>
<td>20 – 16 = 4</td>
<td></td>
</tr>
<tr>
<td>5 + 15 = 20</td>
<td>15 + 5 = 20</td>
<td>20 – 5 = 15</td>
<td>20 – 15 = 5</td>
<td></td>
</tr>
<tr>
<td>6 + 14 = 20</td>
<td>14 + 6 = 20</td>
<td>20 – 6 = 14</td>
<td>20 – 14 = 6</td>
<td></td>
</tr>
<tr>
<td>7 + 13 = 20</td>
<td>13 + 7 = 20</td>
<td>20 – 7 = 13</td>
<td>20 – 13 = 7</td>
<td></td>
</tr>
<tr>
<td>8 + 12 = 20</td>
<td>12 + 8 = 20</td>
<td>20 – 8 = 12</td>
<td>20 – 12 = 8</td>
<td></td>
</tr>
<tr>
<td>9 + 11 = 20</td>
<td>11 + 9 = 20</td>
<td>20 – 9 = 11</td>
<td>20 – 11 = 9</td>
<td></td>
</tr>
<tr>
<td>10 + 10 = 20</td>
<td></td>
<td>20 – 10 = 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

They should be able to answer these questions in any order, including missing number questions e.g. 19 + ○ = 20 or 20 – ○ = 8.

Key Vocabulary
What do I add to 5 to make 20?
What is 20 take away 6?
What is 3 less than 20?
How many more than 16 is 20?

Top Tips
The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

Use what you already know – Use number bonds to 10 (e.g. 7 + 3 = 10) to work out related number bonds to 20 (e.g. 17 + 3 = 20).

Use practical resources – Make collections of 20 objects. Ask questions such as, “How many more conkers would I need to make 20?”

Make a poster – We use Numicon at school. You can find pictures of the Numicon shapes here: bit.ly/NumiconPictures – your child could make a poster showing the different ways of making 20.

Play games – You can play number bond pairs online at www.conkermaths.com and then see how many questions you can answer in just one minute.
Key Instant Recall Facts

Year 2 – Autumn 2

I know the multiplication and division facts for the 2 times table.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

<table>
<thead>
<tr>
<th>Multiplication</th>
<th>Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2 \times 1 = 2$</td>
<td>$2 \div 2 = 1$</td>
</tr>
<tr>
<td>$2 \times 2 = 4$</td>
<td>$4 \div 2 = 2$</td>
</tr>
<tr>
<td>$2 \times 3 = 6$</td>
<td>$6 \div 2 = 3$</td>
</tr>
<tr>
<td>$2 \times 4 = 8$</td>
<td>$8 \div 2 = 4$</td>
</tr>
<tr>
<td>$2 \times 5 = 10$</td>
<td>$10 \div 2 = 5$</td>
</tr>
<tr>
<td>$2 \times 6 = 12$</td>
<td>$12 \div 2 = 6$</td>
</tr>
<tr>
<td>$2 \times 7 = 14$</td>
<td>$14 \div 2 = 7$</td>
</tr>
<tr>
<td>$2 \times 8 = 16$</td>
<td>$16 \div 2 = 8$</td>
</tr>
<tr>
<td>$2 \times 9 = 18$</td>
<td>$18 \div 2 = 9$</td>
</tr>
<tr>
<td>$2 \times 10 = 20$</td>
<td>$20 \div 2 = 10$</td>
</tr>
<tr>
<td>$2 \times 11 = 22$</td>
<td>$22 \div 2 = 11$</td>
</tr>
<tr>
<td>$2 \times 12 = 24$</td>
<td>$24 \div 2 = 12$</td>
</tr>
</tbody>
</table>

They should be able to answer these questions in any order, including missing number questions e.g. $2 \times \Box = 8$ or $\Box \div 2 = 6$.

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

Songs and Chants – You can 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.

Use what you already know – If your child knows that $2 \times 5 = 10$, they can use this fact to work out that $2 \times 6 = 12$.

Test the Parent – Your child can make up their own tricky division questions for you e.g. What is 18 divided by 2? They need to be able to multiply to create these questions.

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

Year 2 – Spring 1

I know doubles and halves of numbers to 20.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

<table>
<thead>
<tr>
<th>Double</th>
<th>Half of 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 + 0 = 0</td>
<td>½ of 0 = 0</td>
</tr>
<tr>
<td>1 + 1 = 1</td>
<td>½ of 2 = 1</td>
</tr>
<tr>
<td>2 + 2 = 4</td>
<td>½ of 4 = 2</td>
</tr>
<tr>
<td>3 + 3 = 6</td>
<td>½ of 6 = 3</td>
</tr>
<tr>
<td>4 + 4 = 8</td>
<td>½ of 8 = 4</td>
</tr>
<tr>
<td>5 + 5 = 10</td>
<td>½ of 10 = 5</td>
</tr>
<tr>
<td>6 + 6 = 12</td>
<td>½ of 12 = 6</td>
</tr>
<tr>
<td>7 + 7 = 14</td>
<td>½ of 14 = 7</td>
</tr>
<tr>
<td>8 + 8 = 16</td>
<td>½ of 16 = 8</td>
</tr>
<tr>
<td>9 + 9 = 18</td>
<td>½ of 18 = 9</td>
</tr>
<tr>
<td>10 + 10 = 20</td>
<td>½ of 20 = 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Top Tips</th>
</tr>
</thead>
</table>

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

Use what you already know – Encourage your child to find the connection between the 2 times table and double facts.

Ping Pong – In this game, the parent says, “Ping,” and the child replies, “Pong.” Then the parent says a number and the child doubles it. For a harder version, the adult can say, “Pong.” The child replies, “Ping,” and then halves the next number given.

Practise online – Go to www.conkermaths.com and see how many questions you can answer in just 90 seconds.

Key Vocabulary

What is double 9?
What is half of 14?
I know the multiplication and division facts for the 10 times table.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

\[
\begin{array}{c|c}
10 \times 1 &= 10 \\
10 \times 2 &= 20 \\
10 \times 3 &= 30 \\
10 \times 4 &= 40 \\
10 \times 5 &= 50 \\
10 \times 6 &= 60 \\
10 \times 7 &= 70 \\
10 \times 8 &= 80 \\
10 \times 9 &= 90 \\
10 \times 10 &= 100 \\
10 \times 11 &= 110 \\
10 \times 12 &= 120 \\
10 \div 10 &= 1 \\
20 \div 10 &= 2 \\
30 \div 10 &= 3 \\
40 \div 10 &= 4 \\
50 \div 10 &= 5 \\
60 \div 10 &= 6 \\
70 \div 10 &= 7 \\
80 \div 10 &= 8 \\
90 \div 10 &= 9 \\
100 \div 10 &= 10 \\
110 \div 10 &= 11 \\
120 \div 10 &= 12
\end{array}
\]

They should be able to answer these questions in any order, including missing number questions e.g. \(10 \times \square = 80\) or \(\square \div 10 = 6\).

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

Pronunciation – Make sure that your child is pronouncing the numbers correctly and not getting confused between thirteen and thirty.

Songs and Chants – You can 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.

Test the Parent – Your child can make up their own tricky division questions for you e.g. What is 70 divided by 7? They need to be able to multiply to create these questions.

Apply these facts to real life situations – How many toes are in your house? What other multiplication and division questions can your child make up?
Key Instant Recall Facts

Year 2 – Summer 1

I can tell the time.

By the end of this half term, children 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.

Top Tips

The secret to success is practising little and often. If you would like more ideas, please speak to your child’s teacher.

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.

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 quarter past four.”
“We need to leave the house at half past eight.”

Key Vocabulary

- Twelve o’clock
- Half past two
- Quarter past three
- Quarter to nine
- Five past one
- Twenty-five to ten
I know the multiplication and division facts for the 5 times table.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

\[
\begin{align*}
5 \times 1 &= 5 & 5 \div 5 &= 1 \\
5 \times 2 &= 10 & 10 \div 5 &= 2 \\
5 \times 3 &= 15 & 15 \div 5 &= 3 \\
5 \times 4 &= 20 & 20 \div 5 &= 4 \\
5 \times 5 &= 25 & 25 \div 5 &= 5 \\
5 \times 6 &= 30 & 30 \div 5 &= 6 \\
5 \times 7 &= 35 & 35 \div 5 &= 7 \\
5 \times 8 &= 40 & 40 \div 5 &= 8 \\
5 \times 9 &= 45 & 45 \div 5 &= 9 \\
5 \times 10 &= 50 & 50 \div 5 &= 10 \\
5 \times 11 &= 55 & 55 \div 5 &= 11 \\
5 \times 12 &= 60 & 60 \div 5 &= 12
\end{align*}
\]

Key Vocabulary

- What is 5 multiplied by 7?
- What is 5 times 9?
- What is 60 divided by 5?

They should be able to answer these questions in any order, including missing number questions e.g. \(5 \times \bigcirc = 40\) or \(\bigcirc \div 5 = 9\).

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

Songs and Chants – You can 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.

Spot patterns – What patterns can your child spot in the 5 times table? Are there any similarities with the 10 times table?

Test the Parent – Your child can make up their own tricky division questions for you e.g. What is 45 divided by 5? They need to be able to multiply to create these questions.

Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some strange picture stories to help children remember.
I know number bonds for all numbers to 20.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 + 9 = 11</td>
<td>3 + 8 = 11</td>
<td>4 + 7 = 11</td>
</tr>
<tr>
<td>3 + 8 = 11</td>
<td>4 + 7 = 11</td>
<td>5 + 6 = 11</td>
</tr>
<tr>
<td>4 + 7 = 11</td>
<td>5 + 6 = 11</td>
<td>6 + 5 = 11</td>
</tr>
<tr>
<td>5 + 6 = 11</td>
<td>6 + 5 = 11</td>
<td>7 + 4 = 11</td>
</tr>
<tr>
<td>6 + 5 = 11</td>
<td>7 + 4 = 11</td>
<td>8 + 3 = 11</td>
</tr>
<tr>
<td>7 + 4 = 11</td>
<td>8 + 3 = 11</td>
<td>9 + 2 = 11</td>
</tr>
<tr>
<td>8 + 3 = 11</td>
<td>9 + 2 = 11</td>
<td></td>
</tr>
<tr>
<td>9 + 2 = 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 + 1 = 11</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example of a fact family

6 + 9 = 15
9 + 6 = 15
15 – 9 = 6
15 – 9 = 6

Examples of other facts

4 + 5 = 9
13 + 5 = 18
19 – 7 = 12
10 – 6 = 4

This list includes the most challenging facts but children will need to learn all number bonds for each number to 20 (e.g. 15 + 2 = 17). This includes related subtraction facts (e.g. 17 – 2 = 15).

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

Buy one get three free - 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 doubles and near doubles – If you know that 6 + 6 = 12, how can you work out 6 + 7? What about 5 + 7?

Play games – There are missing number questions at www.conkermaths.com. See how many questions you can answer in just one minute.
Key Instant Recall Facts

Year 3 – Autumn 2

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

By the end of this half term, children 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
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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
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3 × 11 = 33  11 × 3 = 33  33 ÷ 3 = 11  33 ÷ 11 = 3
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Key Vocabulary
What is 3 multiplied by 8?
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They should be able to answer these questions in any order, including missing number questions e.g. 3 × □ = 18 or □ ÷ 3 = 11.

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E.g. 3 × 12 = 36. The answer to the multiplication is 36, so 36 ÷ 3 = 12 and 36 ÷ 12 = 3
Key Instant Recall Facts

Year 3 – Autumn 2

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

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

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</tr>
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They should be able to answer these questions in any order, including missing number questions e.g. $3 \times \Box = 18$ or $\Box \div 3 = 11$.

**Top Tips**

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**Songs and Chants** – You can 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.

**Buy one get three free** – If your child knows one fact (e.g. $3 \times 5 = 15$), 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. $3 \times 12 = 36$. The answer to the multiplication is 36, so $36 \div 3 = 12$ and $36 \div 12 = 3$
I know the multiplication and division facts for the 3 times table.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

- $3 \times 1 = 3$
- $3 \times 2 = 6$
- $3 \times 3 = 9$
- $3 \times 4 = 12$
- $3 \times 5 = 15$
- $3 \times 6 = 18$
- $3 \times 7 = 21$
- $3 \times 8 = 24$
- $3 \times 9 = 27$
- $3 \times 10 = 30$
- $3 \times 11 = 33$
- $3 \times 12 = 36$

- $1 \times 3 = 3$
- $2 \times 3 = 6$
- $3 \times 3 = 9$
- $4 \times 3 = 12$
- $5 \times 3 = 15$
- $6 \times 3 = 18$
- $7 \times 3 = 21$
- $8 \times 3 = 24$
- $9 \times 3 = 27$
- $10 \times 3 = 30$
- $11 \times 3 = 33$
- $12 \times 3 = 36$

- $3 \div 3 = 1$
- $6 \div 3 = 2$
- $9 \div 3 = 3$
- $12 \div 3 = 4$
- $15 \div 3 = 5$
- $18 \div 3 = 6$
- $21 \div 3 = 7$
- $24 \div 3 = 8$
- $27 \div 3 = 9$
- $30 \div 3 = 10$
- $33 \div 3 = 11$
- $36 \div 3 = 12$

- $3 \div 1 = 3$
- $6 \div 2 = 3$
- $9 \div 3 = 3$
- $12 \div 4 = 3$
- $15 \div 5 = 3$
- $18 \div 6 = 3$
- $21 \div 7 = 3$
- $24 \div 8 = 3$
- $27 \div 9 = 3$
- $30 \div 10 = 3$
- $33 \div 11 = 3$
- $36 \div 12 = 3$

They should be able to answer these questions in any order, including missing number questions e.g. $3 \times \circ = 18$ or $\circ \div 3 = 11$.

**Top Tips**

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**Songs and Chants** – You can 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.

**Buy one get three free** – If your child knows one fact (e.g. $3 \times 5 = 15$), 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. $3 \times 12 = 36$. The answer to the multiplication is 36, so $36 \div 3 = 12$ and $36 \div 12 = 3$.
I can recall facts about durations of time.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

<table>
<thead>
<tr>
<th>Month</th>
<th>Number of days in each month</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>31</td>
</tr>
<tr>
<td>February</td>
<td>28/29</td>
</tr>
<tr>
<td>March</td>
<td>31</td>
</tr>
<tr>
<td>April</td>
<td>30</td>
</tr>
<tr>
<td>May</td>
<td>31</td>
</tr>
<tr>
<td>June</td>
<td>30</td>
</tr>
<tr>
<td>July</td>
<td>31</td>
</tr>
<tr>
<td>August</td>
<td>31</td>
</tr>
<tr>
<td>September</td>
<td>30</td>
</tr>
<tr>
<td>October</td>
<td>31</td>
</tr>
<tr>
<td>November</td>
<td>30</td>
</tr>
<tr>
<td>December</td>
<td>31</td>
</tr>
</tbody>
</table>

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 KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**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?
By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

**Year 3 – Spring 2**

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

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

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

They should be able to answer these questions in any order, including missing number questions e.g. $4 \times \bigcirc = 16$ or $\bigcirc \div 4 = 7$.

**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 KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**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 $6 \times 4 = 24$.

**Buy one get three free** – 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?
Key Instant Recall Facts

Year 3 – Summer 1

I can tell the time.

By the end of this half term, children 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.

Top Tips

The secret to success is practising little and often. Use time wisely. If you would like more ideas, please speak to your child’s teacher.

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.”

Key Vocabulary

Twelve o’clock
Half past two
Quarter past three
Quarter to nine
Five past one
Twenty-five to ten
Key Instant Recall Facts

Year 3 – Summer 2

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

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

<table>
<thead>
<tr>
<th>Multiplication &amp; Division Facts for the 8 Times Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8 \times 1 = 8$</td>
</tr>
<tr>
<td>$8 \times 2 = 16$</td>
</tr>
<tr>
<td>$8 \times 3 = 24$</td>
</tr>
<tr>
<td>$8 \times 4 = 32$</td>
</tr>
<tr>
<td>$8 \times 5 = 40$</td>
</tr>
<tr>
<td>$8 \times 6 = 48$</td>
</tr>
<tr>
<td>$8 \times 7 = 56$</td>
</tr>
<tr>
<td>$8 \times 8 = 64$</td>
</tr>
<tr>
<td>$8 \times 9 = 72$</td>
</tr>
<tr>
<td>$8 \times 10 = 80$</td>
</tr>
<tr>
<td>$8 \times 11 = 88$</td>
</tr>
<tr>
<td>$8 \times 12 = 96$</td>
</tr>
</tbody>
</table>

They should be able to answer these questions in any order, including missing number questions e.g. $8 \times \bigcirc = 16$ or $\bigcirc \div 8 = 7$.

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

Songs and Chants – You can 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 multiplying 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.
Key Instant Recall Facts
Year 4 – Autumn 1

I know number bonds to 100.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

Some examples:

<table>
<thead>
<tr>
<th>Operation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 + 40 = 100</td>
<td>37 + 63 = 100</td>
</tr>
<tr>
<td>40 + 60 = 100</td>
<td>63 + 37 = 100</td>
</tr>
<tr>
<td>100 – 40 = 60</td>
<td>100 – 63 = 37</td>
</tr>
<tr>
<td>100 – 60 = 40</td>
<td>100 – 37 = 63</td>
</tr>
<tr>
<td>75 + 25 = 100</td>
<td>48 + 52 = 100</td>
</tr>
<tr>
<td>25 + 75 = 100</td>
<td>52 + 48 = 100</td>
</tr>
<tr>
<td>100 – 25 = 75</td>
<td>100 – 52 = 48</td>
</tr>
<tr>
<td>100 – 75 = 25</td>
<td>100 – 48 = 52</td>
</tr>
</tbody>
</table>

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

**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?

**Top Tips**

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**Buy one get three free** - 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](http://www.conkermaths.com). See how many questions you can answer in just 90 seconds. There is also a number bond pair game to play.
By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

### Year 4 – Autumn 2

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

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

- \(6 \times 1 = 6\)
- \(1 \times 6 = 6\)
- \(6 \div 6 = 1\)
- \(6 \div 1 = 6\)
- \(6 \times 2 = 12\)
- \(2 \times 6 = 12\)
- \(12 \div 6 = 2\)
- \(12 \div 2 = 6\)
- \(6 \times 3 = 18\)
- \(3 \times 6 = 18\)
- \(18 \div 6 = 3\)
- \(18 \div 3 = 6\)
- \(6 \times 4 = 24\)
- \(4 \times 6 = 24\)
- \(24 \div 6 = 4\)
- \(24 \div 4 = 6\)
- \(6 \times 5 = 30\)
- \(5 \times 6 = 30\)
- \(30 \div 6 = 5\)
- \(30 \div 5 = 6\)
- \(6 \times 6 = 36\)
- \(6 \times 6 = 36\)
- \(36 \div 6 = 6\)
- \(36 \div 6 = 6\)
- \(6 \times 7 = 42\)
- \(7 \times 6 = 42\)
- \(42 \div 6 = 7\)
- \(42 \div 7 = 6\)
- \(6 \times 8 = 48\)
- \(8 \times 6 = 48\)
- \(48 \div 6 = 8\)
- \(48 \div 8 = 6\)
- \(6 \times 9 = 54\)
- \(9 \times 6 = 54\)
- \(54 \div 6 = 9\)
- \(54 \div 9 = 6\)
- \(6 \times 10 = 60\)
- \(10 \times 6 = 60\)
- \(60 \div 6 = 10\)
- \(60 \div 10 = 6\)
- \(6 \times 11 = 66\)
- \(11 \times 6 = 66\)
- \(66 \div 6 = 11\)
- \(66 \div 11 = 6\)
- \(6 \times 12 = 72\)
- \(12 \times 6 = 72\)
- \(72 \div 6 = 12\)
- \(72 \div 12 = 6\)

They should be able to answer these questions in any order, including missing number questions e.g. \(6 \times \Box = 72\) or \(\Box \div 6 = 7\).

#### 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 KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

- **Songs and Chants** – You can 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. \(7 \times 3 = 21\) and double 21 is 42, so \(7 \times 6 = 42\).

- **Buy one get three free** – If your child knows one fact (e.g. \(3 \times 6 = 18\)), 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. \(6 \times 12 = 72\). The answer to the multiplication is 72, so \(72 \div 6 = 12\) and \(72 \div 12 = 6\).
Key Instant Recall Facts

Year 4 – Spring 1

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

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

<table>
<thead>
<tr>
<th>9 × 1 = 9</th>
<th>9 ÷ 9 = 1</th>
<th>11 × 1 = 11</th>
<th>11 ÷ 11 = 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 × 2 = 18</td>
<td>18 ÷ 9 = 2</td>
<td>11 × 2 = 22</td>
<td>22 ÷ 11 = 2</td>
</tr>
<tr>
<td>9 × 3 = 27</td>
<td>27 ÷ 9 = 3</td>
<td>11 × 3 = 33</td>
<td>33 ÷ 11 = 3</td>
</tr>
<tr>
<td>9 × 4 = 36</td>
<td>36 ÷ 9 = 4</td>
<td>11 × 4 = 44</td>
<td>44 ÷ 11 = 4</td>
</tr>
<tr>
<td>9 × 5 = 45</td>
<td>45 ÷ 9 = 5</td>
<td>11 × 5 = 55</td>
<td>55 ÷ 11 = 5</td>
</tr>
<tr>
<td>9 × 6 = 54</td>
<td>54 ÷ 9 = 6</td>
<td>11 × 6 = 66</td>
<td>66 ÷ 11 = 6</td>
</tr>
<tr>
<td>9 × 7 = 63</td>
<td>63 ÷ 9 = 7</td>
<td>11 × 7 = 77</td>
<td>77 ÷ 11 = 7</td>
</tr>
<tr>
<td>9 × 8 = 72</td>
<td>72 ÷ 9 = 8</td>
<td>11 × 8 = 88</td>
<td>88 ÷ 11 = 8</td>
</tr>
<tr>
<td>9 × 9 = 81</td>
<td>81 ÷ 9 = 9</td>
<td>11 × 9 = 99</td>
<td>99 ÷ 11 = 9</td>
</tr>
<tr>
<td>9 × 10 = 90</td>
<td>90 ÷ 9 = 10</td>
<td>11 × 10 = 110</td>
<td>110 ÷ 11 =</td>
</tr>
<tr>
<td>9 × 11 = 99</td>
<td>99 ÷ 9 = 11</td>
<td>110</td>
<td>10</td>
</tr>
<tr>
<td>9 × 12 = 108</td>
<td>108 ÷ 9 = 12</td>
<td>11 × 11 = 121</td>
<td>121 ÷ 11 =</td>
</tr>
</tbody>
</table>

They should be able to answer these questions in any order, including missing number questions e.g. 9 × ⃝ = 54 or ⃝ ÷ 9 = 11.

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 KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**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 × 10 – 7 = 70 – 7 = 63). What do you notice?
What happens if you add your original number instead? (e.g. 7 × 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!
Key Instant Recall Facts

Year 4 – Spring 2

I can recognise decimal equivalents of fractions.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

\[
\begin{align*}
\frac{1}{2} &= 0.5 \\
\frac{1}{4} &= 0.25 \\
\frac{3}{4} &= 0.75 \\
\frac{1}{10} &= 0.1 \\
\frac{2}{10} &= 0.2 \\
\frac{5}{10} &= 0.5 \\
\frac{6}{10} &= 0.6 \\
\frac{9}{10} &= 0.9 \\
\frac{1}{100} &= 0.01 \\
\frac{7}{100} &= 0.07 \\
\frac{21}{100} &= 0.21 \\
\frac{75}{100} &= 0.75 \\
\frac{99}{100} &= 0.99
\end{align*}
\]

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.

Key Vocabulary

- How many tenths is 0.8?
- How many hundredths is 0.12?
- Write 0.75 as a fraction?
- Write \(\frac{1}{4}\) as a decimal?

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

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.
Key Instant Recall Facts
Year 4 – Summer 1

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

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

<table>
<thead>
<tr>
<th>Multiplication</th>
<th>Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 × 1 = 7</td>
<td>7 ÷ 7 = 1</td>
</tr>
<tr>
<td>7 × 2 = 14</td>
<td>14 ÷ 7 = 2</td>
</tr>
<tr>
<td>7 × 3 = 21</td>
<td>21 ÷ 7 = 3</td>
</tr>
<tr>
<td>7 × 4 = 28</td>
<td>28 ÷ 7 = 4</td>
</tr>
<tr>
<td>7 × 5 = 35</td>
<td>35 ÷ 7 = 5</td>
</tr>
<tr>
<td>7 × 6 = 42</td>
<td>42 ÷ 7 = 6</td>
</tr>
<tr>
<td>7 × 7 = 49</td>
<td>49 ÷ 7 = 7</td>
</tr>
<tr>
<td>7 × 8 = 56</td>
<td>56 ÷ 7 = 8</td>
</tr>
<tr>
<td>7 × 9 = 63</td>
<td>63 ÷ 7 = 9</td>
</tr>
<tr>
<td>7 × 10 = 70</td>
<td>70 ÷ 7 = 10</td>
</tr>
<tr>
<td>7 × 11 = 77</td>
<td>77 ÷ 7 = 11</td>
</tr>
<tr>
<td>7 × 12 = 84</td>
<td>84 ÷ 7 = 12</td>
</tr>
</tbody>
</table>

They should be able to answer these questions in any order, including missing number questions e.g. 7 × ☐ = 28 or ☐ ÷ 6 = 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 KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**Songs and Chants** – You can 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.
I can multiply and divide single-digit numbers by 10 and 100.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>$7 \times 10$</td>
<td>70</td>
</tr>
<tr>
<td>$30 \times 10$</td>
<td>300</td>
</tr>
<tr>
<td>$0.8 \times 10$</td>
<td>8</td>
</tr>
<tr>
<td>$10 \times 7$</td>
<td>70</td>
</tr>
<tr>
<td>$10 \times 30$</td>
<td>300</td>
</tr>
<tr>
<td>$10 \times 0.8$</td>
<td>8</td>
</tr>
<tr>
<td>$70 \div 7$</td>
<td>10</td>
</tr>
<tr>
<td>$300 \div 30$</td>
<td>10</td>
</tr>
<tr>
<td>$8 \div 0.8$</td>
<td>10</td>
</tr>
<tr>
<td>$70 \div 10$</td>
<td>7</td>
</tr>
<tr>
<td>$300 \div 10$</td>
<td>30</td>
</tr>
<tr>
<td>$8 \div 10$</td>
<td>0.8</td>
</tr>
<tr>
<td>$6 \times 100$</td>
<td>600</td>
</tr>
<tr>
<td>$40 \times 100$</td>
<td>4000</td>
</tr>
<tr>
<td>$0.2 \times 10$</td>
<td>2</td>
</tr>
<tr>
<td>$100 \times 6$</td>
<td>600</td>
</tr>
<tr>
<td>$100 \times 40$</td>
<td>4000</td>
</tr>
<tr>
<td>$10 \times 0.2$</td>
<td>2</td>
</tr>
<tr>
<td>$600 \div 6$</td>
<td>100</td>
</tr>
<tr>
<td>$4000 \div 40$</td>
<td>100</td>
</tr>
<tr>
<td>$2 \div 0.2$</td>
<td>10</td>
</tr>
<tr>
<td>$600 \div 100$</td>
<td>6</td>
</tr>
<tr>
<td>$4000 \div 100$</td>
<td>40</td>
</tr>
<tr>
<td>$2 \div 10$</td>
<td>0.2</td>
</tr>
</tbody>
</table>

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. $10 \times \Box = 5$ or $\Box \div 10 = 60$.

**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

**Top Tips**

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.
Key Instant Recall Facts

Year 5 – Autumn 1

I know decimal number bonds to 1 and 10.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

Some examples:

<table>
<thead>
<tr>
<th>Equation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6 + 0.4 = 1</td>
<td>3.7 + 6.3 = 10</td>
</tr>
<tr>
<td>0.4 + 0.6 = 1</td>
<td>6.3 + 3.7 = 10</td>
</tr>
<tr>
<td>1 – 0.4 = 0.6</td>
<td>10 – 6.3 = 3.7</td>
</tr>
<tr>
<td>1 – 0.6 = 0.4</td>
<td>10 – 3.7 = 6.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75 + 0.25 = 1</td>
<td>4.8 + 5.2 = 10</td>
</tr>
<tr>
<td>0.25 + 0.75 = 1</td>
<td>5.2 + 4.8 = 10</td>
</tr>
<tr>
<td>1 – 0.25 = 0.75</td>
<td>10 – 5.2 = 4.8</td>
</tr>
<tr>
<td>1 – 0.75 = 0.25</td>
<td>10 – 4.8 = 5.2</td>
</tr>
</tbody>
</table>

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 + \(\square\) = 10 or 7.2 + \(\square\) = 10.

**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?

**Top Tips**

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**Buy one get three free** - 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](http://www.conkermaths.com). See how many questions you can answer in just 90 seconds. There is also a number bond pair game to play.
Key Instant Recall Facts

Year 5 – Autumn 2

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

By the end of this half term, children should know the following facts. The aim is for them to recall these facts \textit{instantly}.

Please see separate sheet for all times table facts.

### Key Vocabulary
- What is 12 \textit{multiplied by} 6?
- What is 7 \textit{times} 8?
- What is 84 \textit{divided by} 7?

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

### Top Tips

The secret to success is practising \textit{little} and \textit{often}. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**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. \url{www.conkermaths.org} is a good place to start.

**Use memory tricks** – For those hard-to-remember facts, \url{www.multiplication.com} has some strange picture stories to help children remember.
Key Instant Recall Facts
Year 5 – Spring 1

I can recall metric conversions.

By the end of this half term, children 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 1¼ km?

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

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?
I can identify prime numbers up to 20.

By the end of this half term, children 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

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 KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

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

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

<table>
<thead>
<tr>
<th>Square</th>
<th>Calculation</th>
<th>Square Root</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1^2$</td>
<td>$1 \times 1 = 1$</td>
<td>$\sqrt{1} = 1$</td>
</tr>
<tr>
<td>$2^2$</td>
<td>$2 \times 2 = 4$</td>
<td>$\sqrt{4} = 2$</td>
</tr>
<tr>
<td>$3^2$</td>
<td>$3 \times 3 = 9$</td>
<td>$\sqrt{9} = 3$</td>
</tr>
<tr>
<td>$4^2$</td>
<td>$4 \times 4 = 16$</td>
<td>$\sqrt{16} = 4$</td>
</tr>
<tr>
<td>$5^2$</td>
<td>$5 \times 5 = 25$</td>
<td>$\sqrt{25} = 5$</td>
</tr>
<tr>
<td>$6^2$</td>
<td>$6 \times 6 = 36$</td>
<td>$\sqrt{36} = 6$</td>
</tr>
<tr>
<td>$7^2$</td>
<td>$7 \times 7 = 49$</td>
<td>$\sqrt{49} = 7$</td>
</tr>
<tr>
<td>$8^2$</td>
<td>$8 \times 8 = 64$</td>
<td>$\sqrt{64} = 8$</td>
</tr>
<tr>
<td>$9^2$</td>
<td>$9 \times 9 = 81$</td>
<td>$\sqrt{81} = 9$</td>
</tr>
<tr>
<td>$10^2$</td>
<td>$10 \times 10 = 100$</td>
<td>$\sqrt{100} = 10$</td>
</tr>
<tr>
<td>$11^2$</td>
<td>$11 \times 11 = 121$</td>
<td>$\sqrt{121} = 11$</td>
</tr>
<tr>
<td>$12^2$</td>
<td>$12 \times 12 = 144$</td>
<td>$\sqrt{144} = 12$</td>
</tr>
</tbody>
</table>

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 KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**Cycling Squares** – At [http://nrich.maths.org/1151](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.
Key Instant Recall Facts
Year 5 – Summer 2

I can find factor pairs of a number.

By the end of this half term, children 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 $12 \times 12$. 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:

- $24 = 4 \times 6$
- $24 = 8 \times 3$
- $56 = 7 \times 8$
- $54 = 9 \times 6$
- $42 = 6 \times 7$
- $25 = 5 \times 5$
- $84 = 7 \times 12$
- $15 = 5 \times 3$

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 KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

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. $4 \times 12$) 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.
I know the multiplication and division facts for all times tables up to $12 \times 12$.

By the end of this half term, children 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.

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 $\bigcirc \div 60 = 0.7$.

Key Vocabulary
- What is $12$ 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 KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

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.
Key Instant Recall Facts
Year 6 – Autumn 2

I can identify common factors of a pair of numbers.

By the end of this half term, children 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.

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 × 3 and 56 = 8 × 7.

Top Tips

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

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?
Key Instant Recall Facts
Year 6 – Spring 1

I can convert between decimals, fractions and percentages.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

\[
\begin{align*}
\frac{1}{2} & = 0.5 \\
\frac{1}{4} & = 0.25 \\
\frac{3}{4} & = 0.75 \\
\frac{1}{10} & = 0.1 \\
\frac{1}{5} & = 0.2 \\
\frac{3}{5} & = 0.6 \\
\frac{9}{10} & = 0.9 \\
\frac{1}{100} & = 0.01 \\
\frac{7}{100} & = 0.07 \\
\frac{21}{100} & = 0.21 \\
\frac{75}{100} & = 0.75 \\
\frac{99}{100} & = 0.99
\end{align*}
\]

**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**?

actions for ½, ¼, ¾ and any

**Top Tips**

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

**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.
I can identify prime numbers up to 50.

By the end of this half term, children 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

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 KIRFs 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. If you would like more ideas, please speak to your child’s teacher.

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?