

## Class 11 Maths

### Mental Arithmetic:

In order to help you with all of your maths learning, it is important that you are practising your times tables regularly. If you have good times tables knowledge, you will find the questions below much easier as you can apply your knowledge to more difficult questions.

Remember to go on to Times Tables Rockstars regularly:

<https://play.ttrockstars.com/auth>

Your login is the same as the one you use in school.

Numberbots also uses the same login as TTRockstars. See the link below:

<https://play.numberbots.com/#/account/search-school>

### Division:

This week you need to think about how to answer the division questions using the methods we have used in school.

I have given you an example of how to answer each style of question and then you can attempt the questions below:

When dividing by 10, each digit moves one place value column to the right (the number gets smaller)

$$50 \div 10 = 5$$

H T O	H T O
5 0	5

When dividing by 100, each digit moves two columns to the right

$$500 \div 100 = 5$$

H T O	H T O
5 0 0	5

When dividing by 1,000, each digit moves three columns to the right

$$5000 \div 1000 = 5$$

Th H T O	Th H T O
5 0 0 0	5

$$2 \times ? = 14$$

$$14 \div 2 = ?$$


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$$14 \div 2 = 7$$

$$2 \times 7 = 14$$

Inverse

$$21 \div 3 = 7$$


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3	21	(7 \times 3)
	- 21	
	0	

2-digit division

$$(17 + 4) \div 3$$

$$21 \div 3 = 7$$

2-digit division

$$137 \div 4 = 34 \text{ r } 1$$


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4	137	1 \times 4 = 4
	- 120	10 \times 4 = 40
		20 \times 4 = 80
		30 \times 4 = 120
		2 \times 4 = 8
		3 \times 4 = 12
		4 \times 4 = 16
		5 \times 4 = 20

Formal written method- chunking

Division- Knowing your number facts	Division- Dividing by 10, 100 and 1000	Division- Using the inverse	Division- 2-digit	Division- Chunking
<p>Use your times tables knowledge to help you quickly recall the answers to the following questions:</p> <ol style="list-style-type: none"> <li>1) <math>15 \div 3 =</math></li> <li>2) <math>2 \div 2 =</math></li> <li>3) <math>20 \div 10 =</math></li> <li>4) <math>50 \div 5 =</math></li> <li>5) <math>16 \div 4 =</math></li> <li>6) <math>24 \div 6 =</math></li> <li>7) <math>36 \div 3 =</math></li> <li>8) <math>28 \div 7 =</math></li> <li>9) <math>48 \div 6 =</math></li> <li>10) <math>32 \div 4 =</math></li> <li>11) <math>54 \div 9 =</math></li> <li>12) <math>56 \div 8 =</math></li> </ol> <p>You might want to get someone at home to time you or to read the questions out to you.</p>	<p>Calculate the answers to the following using what you know about place value to help you.</p> <ol style="list-style-type: none"> <li>1) <math>30 \div 10</math></li> <li>2) <math>400 \div 10</math></li> <li>3) <math>530 \div 10</math></li> <li>4) <math>100 \div 100</math></li> <li>5) <math>210 \div 10</math></li> <li>6) <math>? \div 10 = 34</math></li> <li>7) <math>570 \div ? = 57</math></li> <li>8) <math>4,320 \div 10</math></li> <li>9) <math>2,000 \div 1000</math></li> <li>10) <math>3,400 \div 100</math></li> </ol> <p><i>Hint: think about what happens to a number when you are <b>dividing</b>. Should it get smaller or bigger? Which way will the number move in the place value chart?</i></p>	<p>Use your known multiplication and division facts to help you to calculate the missing numbers.</p> <ol style="list-style-type: none"> <li>1) <math>3 \times ? = 12</math></li> <li>2) <math>? \times 37 = 37</math></li> <li>3) <math>? \div 5 = 7</math></li> <li>4) <math>64 \div ? = 8</math></li> <li>5) <math>2 = ? \div 16</math></li> <li>6) <math>7 \times 20 =</math></li> <li>7) <math>4 \times 3 \times 7 =</math></li> <li>8) <math>64 \div 4 =</math></li> <li>9) <math>? \div 9 = 13</math></li> <li>10) <math>14 \times 21 =</math></li> </ol> <p><i>It might be useful if you use the methods you used last week during your multiplication recap.</i></p>	<p>Choose the method that works best for you to help you to calculate the answers to the following:</p> <ol style="list-style-type: none"> <li>1) <math>86 \div 2</math></li> <li>2) <math>88 \div 8</math></li> <li>3) <math>44 \div 2</math></li> <li>4) <math>74 \div 2</math></li> <li>5) <math>54 \div 3</math></li> <li>6) <math>91 \div 7</math></li> </ol> <p><i>For the following questions, you need to first work out the answers in the brackets then divide this by the number shown.</i></p> <ol style="list-style-type: none"> <li>1) <math>(40+52) \div 2</math></li> <li>2) <math>(35 \times 2) \div 5</math></li> <li>3) <math>(60+12) \div 3</math></li> <li>4) <math>(23+19) \div 4</math></li> </ol>	<p>Use the <b>written chunking</b> method above to help you to calculate the answers to the following:</p> <ol style="list-style-type: none"> <li>1) <math>152 \div 6</math></li> <li>2) <math>162 \div 3</math></li> <li>3) <math>182 \div 8</math></li> <li>4) <math>253 \div 5</math></li> <li>5) <math>217 \div 9</math></li> </ol> <p><i>If you answered these questions correctly, have a go at answering the following:</i></p> <p><b>Challenge</b></p> <ol style="list-style-type: none"> <li>6) <math>585 \div 3</math></li> <li>7) <math>1896 \div 6</math></li> <li>8) <math>2443 \div 7</math></li> <li>9) <math>4371 \div 6</math></li> <li>10) <math>2302 \div 4</math></li> </ol>

**Extension:**

If you complete all of these calculations, you can have a go at these word problems below:

*Hint: You may need to use other operations (+, -, x) as well as division to answer some of the questions. Remember to use some of the methods used above to help you answer the questions.*

1. Some children share 12 strawberries. Each child gets 3 strawberries. How many children are there?
2. Kate's teacher has asked her to arrange 40 chairs in 5 equal rows in the hall. How many chairs will there be in each row?
3. Mr White wants 18 eggs. Eggs are sold in boxes of 3. How many boxes of eggs will Mr White need?
4. There are 32 monkeys in a zoo. Each cage can hold 4 monkeys. How many monkey cages does the zoo need?
5. Alan is reading a book with 315 pages. If Alan wants to read the same number of pages every day, how many pages would Alan have to read each day to finish in 15 days?
6. There are seventeen boys and fourteen girls in a class. The children sit at tables of 4. How many tables are needed?
7. In the cinema you see that the 504 seats are divided into 7 equal sections. How many seats are there in each section?
8. Eddie collects Pokémon cards. He has 462. He decides to share them equally between himself and his two older brothers. How many will each boy get?
9. A sports shop has 45 boxes of tennis balls, each with 3 tennis balls. It also has 129 tennis balls which are put into boxes of 3 tennis balls. How many boxes are there altogether?
10. The headteacher is taking all of Key Stage 2 on a trip to the seaside. There will be 210 children and 24 adults going. How many 42-seater buses will he need to use?