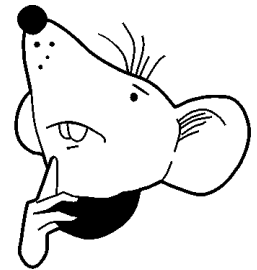
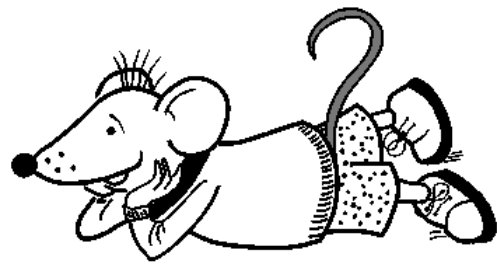
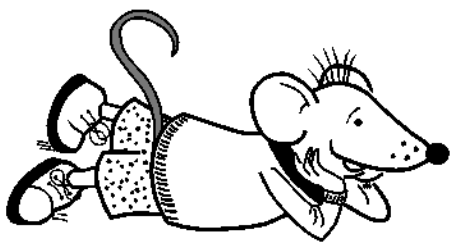


# **MENTAL ARITHMETIC**



## **YEAR 5**

## **SPRING TERM**



# **MathSphere**

**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 1**

Paper 1	Answer	Paper 2	Answer
1. What is the figure 5 worth in the number: 5 638 ?	<b>5 000</b>	1. What is the figure 2 worth in the number: 2 749 ?	<b>2 000</b>
2. What is the figure 7 worth in the number: 76 934 ?	<b>70 000</b>	2. What is the figure 4 worth in the number: 48 293 ?	<b>40 000</b>
3. What is the figure 9 worth in the number: 983 675 ?	<b>900 000</b>	3. What is the figure 7 worth in the number: 726 111 ?	<b>700 000</b>
4. Write in figures: four hundred and sixty two thousand, three hundred and twenty five.	<b>462 325</b>	4. Write in figures: three hundred and twenty eight thousand, four hundred and ninety nine.	<b>328 499</b>
5. What is 79 multiplied by 10 ?	<b>790</b>	5. What is 26 multiplied by 10 ?	<b>260</b>
6. What is 54 multiplied by 100 ?	<b>5 400</b>	6. What is 84 multiplied by 100 ?	<b>8 400</b>
7. What is 67 multiplied by 100 ?	<b>6 700</b>	7. What is 11 multiplied by 100 ?	<b>1 100</b>
8. What is $300 \div 100$ ?	<b>3</b>	8. What is $800 \div 100$ ?	<b>8</b>
9. What is $4\,500 \div 100$ ?	<b>45</b>	9. What is $2\,500 \div 100$ ?	<b>25</b>
10. How many times larger is 5 900 than 59 ?	<b>100</b>	10. How many times larger is 6 200 than 62 ?	<b>100</b>
Comment:		Comment:	

**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 2**

Paper 3	Answer	Paper 4	Answer
1. The distance to the post office is 1 000 metres, give or take 100 metres. What is the nearest it could be?	<b>900 m</b>	1. The distance to the butchers shop is 3 000 metres, give or take 100 metres. What is the furthest it could be?	<b>3 100 m</b>
2. A book weighs 2 Kg, give or take 200 g. What is the most it could weigh?	<b>2 200 g or 2.2kg</b>	2. A concrete block weighs 150 Kg, give or take 10 Kg. What is the least it could weigh?	<b>140 Kg</b>
3. What is the largest number you can make with the digits:  2, 6, 4, 3, 8 ?	<b>86 432</b>	3. What is the smallest number you can make with the digits:  3, 8, 5, 3, 9 ?	<b>33 589</b>
4. Which is the larger number:  34 827 or 34 728 ?	<b>34 827</b>	4. Which is the smaller number:  63 826 or 63 286 ?	<b>63 286</b>
5. What is 76 398 miles to the nearest hundred miles?	<b>76 400</b>	5. What is 48 372 kilometres to the nearest ten kilometres?	<b>48 370</b>
6. Which is the best approximation for $19 \times 6$ :  160, 120, 200 ?	<b>120</b>	6. Which is the best approximation for $28 \times 3$ :  90, 300, 400 ?	<b>90</b>
7. The temperature is $-6^{\circ}\text{C}$ . It rises by $9^{\circ}\text{C}$ . What is the temperature now?	<b><math>3^{\circ}\text{C}</math></b>	7. The temperature is $-4^{\circ}\text{C}$ . It rises by $8^{\circ}\text{C}$ . What is the temperature now?	<b><math>4^{\circ}\text{C}</math></b>
8. The temperature is $-10^{\circ}\text{C}$ . How much does it need to rise to reach $2^{\circ}\text{C}$ ?	<b><math>12^{\circ}\text{C}</math></b>	8. The temperature is $-14^{\circ}\text{C}$ . How much does it need to rise to reach $6^{\circ}\text{C}$ ?	<b><math>20^{\circ}\text{C}</math></b>
9. What is the difference between $-9$ and $-6$ ?	<b>3</b>	9. What is the difference between $-15$ and $-1$ ?	<b>14</b>
10. What is the difference between $-3$ and $2$ ?	<b>5</b>	10. What is the difference between $-20$ and $6$ ?	<b>26</b>
Comment:		Comment:	

**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 3**

Paper 5	Answer	Paper 6	Answer
1. What is the next number in this sequence:  -35, -30, -25, -20, ____ ?	<b>-15</b>	1. What is the next number in this sequence:  -33, -30, -27, -24, ____ ?	<b>-21</b>
2. What is the missing number in this sequence:  -12, -9, <input type="text"/> , -3, ?	<b>-6</b>	2. What is the missing number in this sequence:  -20, -15, <input type="text"/> , -5, ?	<b>-10</b>
3. John counts up in threes beginning at 20. What is the fifth number in his sequence (including 20)?	<b>32</b>	3. John counts up in fours beginning at 32. What is the sixth number in his sequence (including 32)?	<b>52</b>
4. Count back four sevens from 60. What number do you finish on?	<b>32</b>	4. Count back three sixes from 36. What number do you finish on?	<b>18</b>
5. Which of these numbers are divisible by 100:  230, 700, 850, 1 200 ?	<b>700 1 200</b>	5. Which of these numbers are divisible by 100:  900, 650, 800, 2 470 ?	<b>900 800</b>
6. Which of these are square numbers:  4, 9, 12 ?	<b>4, 9</b>	6. Which of these are square numbers:  1, 15, 16 ?	<b>1, 16</b>
7. What is the area of a square if its sides are 5 cm long?	<b>25 cm<sup>2</sup></b>	7. What is the area of a square if its sides are 8 cm long?	<b>64 cm<sup>2</sup></b>
8. What are the factors of 14 ?	<b>1, 2, 7, 14</b>	8. What are the factors of 35 ?	<b>1, 5, 7, 35</b>
9. Which is the biggest fraction:  $\frac{1}{2}$ , $\frac{3}{4}$ , $\frac{1}{3}$	<b><math>\frac{3}{4}</math></b>	9. Which is the biggest fraction:  $\frac{2}{3}$ , $\frac{1}{3}$ , $\frac{5}{6}$	<b><math>\frac{5}{6}</math></b>
10. What is one seventh of 42 ?	<b>6</b>	10. What is one eighth of 56 ?	<b>7</b>
Comment:		Comment:	

**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 4**

Paper 7	Answer	Paper 8	Answer
1. What is three quarters of 240 ?	<b>180</b>	1. What is four tenths of 400 ?	<b>160</b>
2. What is two fifths of 100 ?	<b>40</b>	2. What is six tenths of 300 ?	<b>180</b>
3. What is thirty hundredths of one pound?	<b>30p</b>	3. What is seventy hundredths of one pound?	<b>70p</b>
4. John has two and a half times as many model aeroplanes as James. If James has 12, how many does John have?	<b>30</b>	4. Joanna has three and a half times as many dolls as Helen. If Helen has 8, how many does Joanna have?	<b>28</b>
5. What are the next two terms in this sequence:  1.4, 1.6, 1.8, 2.0, ____, ____	<b>2.2</b> <b>2.4</b>	5. What are the next two terms in this sequence:  3.8, 4.0, 4.2, 4.4, ____, ____	<b>4.6</b> <b>4.8</b>
6. How many centimetres are there in 5.5 metres?	<b>550</b>	6. How many centimetres are there in 9.5 metres?	<b>950</b>
7. Kelly has a piece of ribbon 5 m long. She cuts off 50cm. How much is left?	<b>4.5 m</b>	7. Harry has a piece of string 10 m long. He cuts off 50cm. How much is left?	<b>9.5 m</b>
8. What is one half as a decimal?	<b>0.5</b>	8. What is one tenth as a decimal?	<b>0.1</b>
9. What is one quarter as a decimal?	<b>0.25</b>	9. What is one hundredth as a decimal?	<b>0.01</b>
10. What is three quarters as a decimal?	<b>0.75</b>	10. What is four and a half as a decimal?	<b>4.5</b>
Comment:		Comment:	

**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 5**

Paper 9	Answer	Paper 10	Answer
1. Peter has 100 marbles. 40 are blue. What percentage of his marbles is this?	<b>40%</b>	1. Jenny has 100 pieces of card. 40 are coloured white and 60 are coloured pink. What percentage are pink?	<b>60%</b>
2. What fraction is the same as 10% ?	$\frac{10}{100}$ <b>or <math>\frac{1}{10}</math></b>	2. What fraction is the same as 20% ?	$\frac{20}{100}$ <b>or equiv</b>
3. What fraction is the same as 50% ?	$\frac{50}{100}$ <b>or <math>\frac{1}{2}</math></b>	3. What fraction is the same as 25% ?	$\frac{25}{100}$ <b>or equiv</b>
4. What is $4\,560 + 30$ ?	<b>4 590</b>	4. What is $6\,729 + 50$ ?	<b>6 779</b>
5. What is $0.3 + 0.4$ ?	<b>0.7</b>	5. What is $0.2 + 0.7$ ?	<b>0.9</b>
6. What is $2.1 + 2.3$ ?	<b>4.4</b>	6. What is $4.6 + 1.3$ ?	<b>5.9</b>
7. What must I take from 230 to leave 75 ?	<b>155</b>	7. What must I take from 640 to leave 85 ?	<b>555</b>
8. How much is 120 less than 250 ?	<b>130</b>	8. How much is 230 less than 660 ?	<b>430</b>
9. Add 325 and 63.	<b>388</b>	9. Add 421 and 99.	<b>420</b>
10. Subtract 56 from 600.	<b>544</b>	10. Subtract 83 from 500.	<b>417</b>
Comment:		Comment:	

**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 6**

Paper 11	Answer	Paper 12	Answer
1. If $700 - 368 = 332$ , what is $368 + 332$ ?	<b>700</b>	1. If $850 - 472 = 378$ , what is $378 + 472$ ?	<b>850</b>
2. Find $34 + 12 + 6 + 1$ .	<b>53</b>	2. Find $26 + 15 + 5 + 5$ .	<b>51</b>
3. What is three thousands plus five hundreds?	<b>3 500</b>	3. What is six thousands plus two hundreds?	<b>6 200</b>
4. What is $6\ 003 - 5\ 799$ ?	<b>204</b>	4. What is $8\ 005 - 7\ 999$ ?	<b>6</b>
5. How many times is 4 500 bigger than 45 ?	<b>100</b>	5. How many times is 8 500 bigger than 85 ?	<b>100</b>
6. What is $9 \times 7$ ?	<b>63</b>	6. What is $8 \times 8$ ?	<b>64</b>
7. What is $8 \times 6$ ?	<b>48</b>	7. What is $7 \times 7$ ?	<b>49</b>
8. How many lengths of wood 30 cm long can you cut from a piece 1 m long?	<b>3</b>	8. How many lengths of cotton 20 cm long can you cut from a piece 2 m long?	<b>10</b>
9. What must I divide 56 by to get 7 ?	<b>8</b>	9. What must I divide 81 by to get 9 ?	<b>9</b>
10. What is the quotient of 150 and 10 ?	<b>15</b>	10. What is the quotient of 240 and 10 ?	<b>24</b>
Comment:		Comment:	

**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 7**

Paper 13	Answer	Paper 14	Answer
1. If a coach ticket costs £24, how many could I buy with £100 ?	<b>4</b>	1. If a theatre ticket costs £15, how many could I buy with £100 ?	<b>6</b>
2. If a ferry across a river holds 100 people, how many trips would it need to make to take 1 020 people across the river?	<b>11</b>	2. If a train carriage holds 50 people, how many carriages would a train need to carry 630 people?	<b>13</b>
3. What is the product of 6.5 and 2 ?	<b>13</b>	3. What is the product of 4.5 and 4 ?	<b>18</b>
4. Double 160 and then double the answer.	<b>640</b>	4. Double 320 and then double the answer.	<b>1 280</b>
5. What is half of £71 ?	<b>£35.50</b>	5. What is half of £93 ?	<b>£46.50</b>
6. If 6 times 67 is 402, what is 12 times 67 ?	<b>804</b>	6. If 4 times 53 is 212, what is 8 times 53 ?	<b>424</b>
7. If I multiply 64 by 100 and halve the answer, how many 64s have I calculated?	<b>50</b>	7. If I multiply 46 by 100 and halve the answer, how many 46s have I calculated?	<b>50</b>
8. What are the factors of 32 ?	<b>1, 2, 4, 8, 16, 32</b>	8. What are the factors of 30 ?	<b>1, 2, 3, 5, 6, 10, 15, 30</b>
9. Give a multiple of 32 which is more than 80 and smaller than 100.	<b>96</b>	9. Give a multiple of 24 which is more than 60 and smaller than 80.	<b>72</b>
10. How many 21s are there in 63 ?	<b>3</b>	10. How many 22s are there in 88 ?	<b>4</b>
Comment:		Comment:	



**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 8**

Paper 15	Answer	Paper 16	Answer
1. If 11 times 12 is 132, what is 132 divided by 12 ?	<b>11</b>	1. If 13 times 17 is 221, what is 221 divided by 17 ?	<b>13</b>
2. What is the difference between a half of 64 and 28 ?	<b>4</b>	2. What is the difference between a half of 84 and 36 ?	<b>6</b>
3. The perimeter of a square is 60 cm. What is the length of one side?	<b>15 cm</b>	3. The perimeter of a square is 84 cm. What is the length of one side?	<b>21 cm</b>
4. The perimeter of a rectangle is 20 cm. The long side is 7cm. How long is the short side?	<b>3 cm</b>	4. The perimeter of a rectangle is 44 cm. The long side is 13cm. How long is the short side?	<b>9 cm</b>
5. What is the last digit of the answer to $4\,982 + 7\,485$ ?	<b>7</b>	5. What is the last digit of the answer to $9\,527 + 2\,733$ ?	<b>0</b>
6. What is the last digit of the answer to $7\,895 - 5\,383$ ?	<b>2</b>	6. What is the last digit of the answer to $8\,457 - 5\,562$ ?	<b>1</b>
7. Is the answer to $3\,723 + 8\,755$ odd or even?	<b>even</b>	7. Is the answer to $8\,474 + 8\,936$ odd or even?	<b>even</b>
8. Which is larger:  $23\,597$ or $23\,975$ ?	<b>23 975</b>	8. Which is larger:  $73\,683$ or $73\,863$ ?	<b>73 863</b>
9. Which is correct:  $17 + 6 = 102$ $17 \times 6 = 102$ $17 - 6 = 102$ ?	<b><math>17 \times 6 = 102</math></b>	9. Which is correct:  $26 + 7 = 33$ $26 \times 7 = 33$ $26 - 7 = 33$ ?	<b><math>26 + 7 = 33</math></b>
10. Which two consecutive numbers have a product of 12 ?	<b>3, 4</b>	10. Which two consecutive numbers have a product of 30 ?	<b>5, 6</b>
Comment:		Comment:	

**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 9**

Paper 17	Answer	Paper 18	Answer
1. The length of one side of a hexagon is 4.5 cm. What is its perimeter?	<b>27 cm</b>	1. The length of one side of a hexagon is 3.5 cm. What is its perimeter?	<b>21 cm</b>
2. Two angles together make $180^\circ$ . One of the angles is $60^\circ$ . What is the other angle?	<b><math>120^\circ</math></b>	2. Two angles together make $180^\circ$ . One of the angles is $127^\circ$ . What is the other angle?	<b><math>53^\circ</math></b>
3. What is the next number in the sequence:  -12, -9, -6, -3, ____ ?	<b>0</b>	3. What is the next number in the sequence:  -24, -21, -18, -15, ____ ?	<b>-12</b>
4. How much change would I get from £1 if I spent 60p on a pencil and 23p on a sticker?	<b>17p</b>	4. How much change would I get from £1 if I spent 37p on a stamp and 19p on a key ring?	<b>44p</b>
5. A shelf holds 14 books. How many books would 6 shelves hold?	<b>84</b>	5. A case holds 12 bottles of lemonade. How many bottles would 9 cases hold?	<b>108</b>
6. Deckchairs are stacked in piles of 25. How many deckchairs would there be in eight piles?	<b>200</b>	6. Tables are stacked in piles of 9. How many tables would there be in sixteen piles?	<b>144</b>
7. Gerry had fifty biscuits in a tin. He and his friends ate three fifths of them. How many were left?	<b>20</b>	7. Paulo had one hundred chocolates in a large box. He and his friends ate two fifths of them. How many were left?	<b>60</b>
8. I buy eight twelve pence stamps and six fifteen pence stamps. How much does that cost?	<b>186p or £1.86</b>	8. I buy thirteen ten pence stamps and five twelve pence stamps. How much does that cost?	<b>190p or £1.90</b>
9. The deposit on a television costing £280 is 50%. How much is the deposit?	<b>£140</b>	9. The deposit on a guitar costing £200 is 25%. How much is the deposit?	<b>£50</b>
10. A chair cost £48. In a sale it was reduced by 25%. How much did it cost in the sale?	<b>£36</b>	10. A gettoblaster cost £56. In a sale it was reduced by 25%. How much did it cost in the sale?	<b>£42</b>
Comment:		Comment:	

**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 10**

Paper 19	Answer	Paper 20	Answer
1. A bus can travel at 50 miles per hour. A sports car can travel two and a half times that speed. How fast can the sports car go?	<b>125 mph</b>	1. A tortoise can travel at 0.5 miles per hour. A guinea pig can travel eight times that speed. How fast can the guinea pig go?	<b>4 mph</b>
2. I have two pans. One holds 3 litres of water. The other holds twice as much. How much does the larger pan hold?	<b>6 litres</b>	2. I have two jugs. One holds 2.5 litres of water. The other holds twice as much. How much does the larger jug hold?	<b>5 litres</b>
3. What is nine eights?	<b>72</b>	3. What is seven nines?	<b>63</b>
4. What is three twelves?	<b>36</b>	4. What is ten elevens?	<b>110</b>
5. What is half of £16.80 ?	<b>£8.40</b>	5. What is half of £13.60 ?	<b>£6.80</b>
6. What is one quarter of 66 litres?	<b>16.5 litres</b>	6. What is one quarter of 42 litres?	<b>10.5 litres</b>
7. What is 55 multiplied by 100 ?	<b>5 500</b>	7. What is 87 multiplied by 100 ?	<b>8 700</b>
8. What is six and a half multiplied by 10 ?	<b>65</b>	8. What is four and a half multiplied by 10 ?	<b>45</b>
9. What is the difference between 0.8 and 1.2 ?	<b>0.4</b>	9. What is the difference between 0.6 and 1.3 ?	<b>0.7</b>
10. What is the quotient of 56 and 7?	<b>8</b>	10. What is the quotient of 81 and 9?	<b>9</b>
Comment:		Comment:	

**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 11**

Paper 21	Answer	Paper 22	Answer
1. What is $36 + 49$ ?	<b>85</b>	1. What is $37 + 97$ ?	<b>134</b>
2. What is $79 + 28$ ?	<b>107</b>	2. What is $66 + 84$ ?	<b>150</b>
3. What is $470 + 80$ ?	<b>550</b>	3. What is $350 + 42$ ?	<b>392</b>
4. What is $463 + 100$ ?	<b>563</b>	4. What is $801 + 200$ ?	<b>1 001</b>
5. What is $288 + 200$ ?	<b>488</b>	5. What is $486 + 200$ ?	<b>686</b>
6. What is $399 + 200$ ?	<b>599</b>	6. What is $627 + 300$ ?	<b>927</b>
7. What is $1\ 000 - 5$ ?	<b>995</b>	7. What is $2\ 000 - 8$ ?	<b>1 992</b>
8. What is $1\ 000 - 50$ ?	<b>950</b>	8. What is $2\ 000 - 30$ ?	<b>1 970</b>
9. What is $840 - 27$ ?	<b>813</b>	9. What is $930 - 28$ ?	<b>902</b>
10. What is $5\ 000 - 56 + 56$ ?	<b>5 000</b>	10. What is $6\ 700 - 98 + 98$ ?	<b>6 700</b>
Comment:		Comment:	

**MENTAL ARITHMETIC : YEAR 5 : SPRING TERM : WEEK 12**

Paper 23	Answer	Paper 24	Answer
1. Which is probably most correct:  The pencil is 15 mm long. The pencil is 15 cm long. The pencil is 15 m long.?	<b>15 cm</b>	1. Which is probably most correct:  The front door is 2 mm high. The front door is 2 cm high. The front door is 2 m high.?	<b>2 m</b>
2. What metric unit would you use to measure your weight (mass)?	<b>Kg</b>	2. What metric unit would you use to measure the volume of a swimming pool?	<b>m<sup>3</sup></b>
3. How much does a teaspoon hold approximately?	<b>5 ml</b>	3. What metric unit would you use to measure the length of an ant?	<b>mm</b>
4. Mina has two and a half kilograms of flour in a bowl. She adds another 500 grams. How much does she have now?	<b>3 Kg</b>	4. John has three and a half kilograms of apples in a bag. He adds another 1 500 grams. How much does he have now?	<b>5 Kg</b>
5. A rectangle is 5.1 cm long and 3.9 cm wide. Which is nearest to its area:  15 cm <sup>2</sup> , 20 cm <sup>2</sup> , 45 cm <sup>2</sup> ?	<b>20 cm<sup>2</sup></b>	5. A rectangle is 8.2 cm long and 8.9 cm wide. Which is nearest to its area:  16cm <sup>2</sup> , 64 cm <sup>2</sup> , 72 cm <sup>2</sup> ?	<b>72 cm<sup>2</sup></b>
6. How many minutes are there in five and a half hours?	<b>330</b>	6. How many minutes are there in seven and a half hours?	<b>450</b>
7. Which month has either 28 or 29 days?	<b>Feb</b>	7. How many days are there in the last three months of a year?	<b>92</b>
8. What do we call a year with 366 days?	<b>Leap Year</b>	8. Do Christmas Day and New Year's Day ever occur in the same year?	<b>always</b>
9. What is 50 minutes after 4.50 p.m. ?	<b>5.40 p.m.</b>	9. What is 90 minutes after 6.30 a.m. ?	<b>8.00 a.m.</b>
10. How long is it between 3 a.m. and 5 p.m. ?	<b>14 hours</b>	10. How long is it between 7.30 a.m. and 8.30 p.m. ?	<b>13 hours</b>
Comment:		Comment:	