

Year 8 Core - Number sense ANSWERS

<p>1.</p> <div style="text-align: center;"> </div> <p>a) Label the two multiples of 100 that 18,735 lies between.</p> <p>b) Round 18,735 to the nearest 100 18,700</p> <p>Round 18,735 to the nearest 1,000 19,000</p> <p>Round 18,735 to the nearest 10 18,740</p>	<p>5.</p> <p>Kim's shopping bill totals £37.23</p> <p>She pays with a £50 note.</p> <p>How much change will she receive?</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">£12.77</div>																																																	
<p>2.</p> <p>a) Draw an arrow to estimate the position of the number 8.416 on the number line.</p> <div style="text-align: center;"> </div> <p>b) Round 8.416 to 1 decimal place. 8.4</p> <p>c) Round these numbers to 1 decimal place.</p> <p>8.47 8.5 8.4719 8.5</p>	<p>6.</p> <p>Write >, < or = to complete the statements.</p> <p>a) 12 cm = 120 mm c) 300 m > 3,000 cm</p> <p>b) 4 m > 40 cm d) 0.6 m = 600 mm</p>																																																	
<p>3.</p> <p>Teddy is working out 37×68</p> <div style="display: flex; align-items: center; margin: 10px 0;"> <div style="border: 1px solid black; border-radius: 50%; padding: 10px; background-color: #e0f0ff;"> <p style="text-align: center;">I'm going to round both numbers to 1 significant figure to get an estimate first.</p> </div> </div> <p>a) Complete Teddy's workings.</p> <p>37 to 1 significant figure = 40</p> <p>68 to 1 significant figure = 70</p> <p>So $37 \times 68 \approx$ 40 \times 70 = 2800</p>	<p>7.</p> <p>Convert</p> <p>6 kg 48,000 g</p> <div style="display: flex; justify-content: space-around; margin: 10px 0;"> <div style="border: 1px solid black; padding: 5px 15px;">6000</div> g <div style="border: 1px solid black; padding: 5px 15px;">48</div> kg </div> <p>9,300 ml</p> <div style="border: 1px solid black; padding: 5px 15px; width: fit-content; margin: 10px auto;">9.3</div> litres																																																	
<p>4.</p> <p>Evaluate the expressions, showing each step in your calculation</p> <p>a) $150 - 3 \times 5^2 + 11$ c) $150 - 3 \times (5^2 + 11)$</p> <div style="display: flex; justify-content: space-around; margin: 10px 0;"> <div style="border: 1px solid black; padding: 5px 15px;">86</div> <div style="border: 1px solid black; padding: 5px 15px;">42</div> </div>	<p>8.</p> <p>Here is part of a calendar for 2021.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <table border="1" style="text-align: center; border-collapse: collapse;"> <thead> <tr> <th colspan="7">March 2021</th> </tr> <tr> <th>Sun</th> <th>Mon</th> <th>Tue</th> <th>Wed</th> <th>Thur</th> <th>Fri</th> <th>Sat</th> </tr> </thead> <tbody> <tr> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> <td>13</td> </tr> <tr> <td>14</td> <td>15</td> <td>16</td> <td>17</td> <td>18</td> <td>19</td> <td>20</td> </tr> <tr> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> <td>26</td> <td>27</td> </tr> <tr> <td>28</td> <td>29</td> <td>30</td> <td>31</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> </div> <p>a) What is the date of the third Sunday in March 2021? <u>21st March</u></p> <p>b) How many Wednesdays will there be in March 2021? <u>5</u></p> <p>c) What is the date of the first Saturday in April 2021? <u>3rd April</u></p> <p>d) What day of the week is 26 February 2021? <u>Friday</u></p>	March 2021							Sun	Mon	Tue	Wed	Thur	Fri	Sat		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
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Year 8 Higher - Number sense ANSWERS

1. Given that $x = 4.75$, $y = 2.13$ and $z = 0.0025$, work out the values of the expressions. Give your answers to 1 significant figure.

a) xy c) $\frac{x}{z}$

10

2,000

2. Complete the table.

Number	Rounded to 1 decimal place	Rounded to 2 decimal places	Rounded to 3 decimal places
23.541982	23.5	23.54	23.542
$\frac{7}{12}$	0.6	0.58	0.583
π	3.1	3.14	3.142

3. Work out estimates for the answers to the calculations.

a) $\frac{47 \times 29}{209}$ c) $\frac{193^2}{9.23 - 4.812}$ e) $\frac{3,175 + 6,842}{2.2 \times 4.9}$

7.5

10,000

1,000

4. Aisha goes shopping with £20
She spends £4 on a book and buys 5 magazines each costing £3
Tick the calculations that show how much money she has left in pounds.

$20 - 4 + 5 \times 3$

$20 - (4 + 5) \times 3$

$20 - (4 + 5 \times 3)$

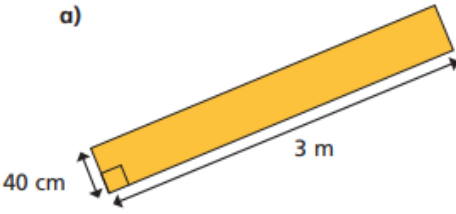
$20 - 4 - 5 \times 3$

$20 - 5 \times 3 + 4$

$20 - (5 \times 3 + 4)$

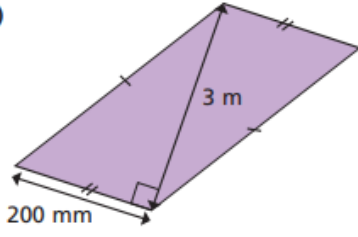
5. Find the area of each shape. Give your answers in cm^2

a)



12,000 cm^2

d)



6,000 cm^2