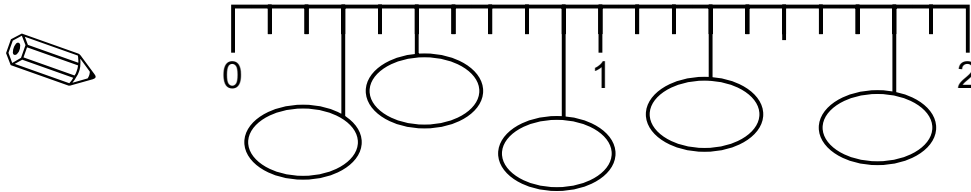


<b>Number</b>	<b>4</b>	<i>Symmetry</i>	<i>50</i>
<i>Writing Numbers as Words</i>	<i>4</i>	<i>Nets of 3D Shapes</i>	<i>53</i>
<i>Ordering Numbers &amp; Place Value</i>	<i>4</i>	<i>Compass Directions</i>	<i>55</i>
<i>Adding &amp; Subtracting</i>	<i>6</i>	<i>Quadrilaterals</i>	<i>56</i>
<i>Multiplying &amp; Dividing</i>	<i>8</i>	<i>Polygons</i>	<i>56</i>
<i>Multiplying &amp; Dividing by 10, 100, 1000</i>	<i>9</i>	<i>Perimeter</i>	<i>57</i>
<i>Long Multiplication &amp; Division</i>	<i>10</i>	<i>Area</i>	<i>59</i>
<i>Money Calculations</i>	<i>12</i>	<i>Volume</i>	<i>62</i>
<i>Fractions</i>	<i>14</i>	<i>Angles</i>	<i>63</i>
<i>Decimals</i>	<i>17</i>	<i>Accurate Drawing</i>	<i>65</i>
<i>Percentages</i>	<i>20</i>	<i>Metric &amp; Imperial Units</i>	<i>66</i>
<i>Special Numbers</i>	<i>24</i>	<i>Estimating Lengths</i>	<i>67</i>
<i>Square Roots</i>	<i>25</i>	<i>Isometric Drawings</i>	<i>68</i>
<i>Negative Numbers</i>	<i>26</i>	<i>LOGO Instructions</i>	<i>69</i>
<i>Ratio &amp; Proportion</i>	<i>27</i>	<i>Transformations</i>	<i>70</i>
<i>Rounding &amp; Estimating</i>	<i>29</i>	<i>Parallel Lines</i>	<i>71</i>
		<i>Tessellation</i>	<i>72</i>
		<i>Congruent Shapes</i>	<i>73</i>
<b>Algebra</b>	<b>33</b>	<b><i>Handling Data</i></b>	<b><i>74</i></b>
<i>Formulae</i>	<i>33</i>	<i>Frequency Diagrams</i>	<i>74</i>
<i>Number Machines</i>	<i>33</i>	<i>Mean, Median, Mode, Range</i>	<i>75</i>
<i>Substituting Values</i>	<i>34</i>	<i>Bar Charts</i>	<i>77</i>
<i>Simplifying &amp; Expanding Expressions</i>	<i>35</i>	<i>Line Graphs</i>	<i>79</i>
<i>Solving Equations</i>	<i>36</i>	<i>Pie Charts</i>	<i>81</i>
<i>Number Patterns</i>	<i>37</i>	<i>Scatter Graphs</i>	<i>83</i>
<i>Coordinates</i>	<i>39</i>	<i>Probability</i>	<i>85</i>
<i>Mappings &amp; Graphs</i>	<i>41</i>		
<i>Conversion Graphs</i>	<i>45</i>	<i>Mental Arithmetic Questions</i>	<i>87</i>
<i>Travel Graphs</i>	<i>46</i>	<i>Answers</i>	<i>88</i>
<i>Trial &amp; Improvement</i>	<i>47</i>	<i>Formulae Sheet</i>	<i>95</i>
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<b>Shape, Space &amp; Measures</b>	<b>48</b>		
<i>Measuring Scales</i>	<i>48</i>		
<i>Time &amp; Timetables</i>	<i>49</i>		

## ORDERING NUMBERS & PLACE VALUE

**N4** Put these numbers in the right place on the number line.

1.3   0.5   1.8   0.9   0.3



(2 marks)

**N5** Put these numbers in order, smallest first:

10.25   20.51   11.25   15.21



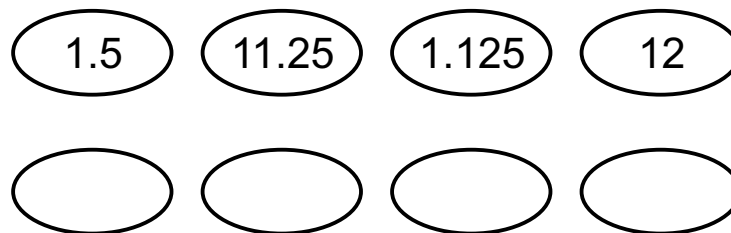
..... (1 mark)

**N6** Which is larger, 19.91 or 19.191?



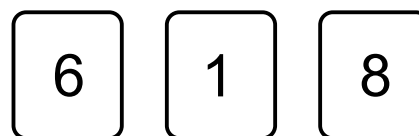
..... (1 mark)

**N7** Put these decimals in order, starting with the smallest.



(1 mark)

**N8** Ross has three numbered cards.



(a) Rearrange the cards to make the largest possible number.



(1 mark)

(b) What is the smallest number Ross can make using all three cards?

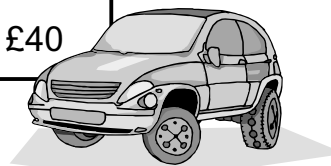


(1 mark)

**A1** This is a notice hanging outside a holiday car hire office:

**Luxury Auto Hire: All prices are per day**

Family car: £20 per person, plus an additional £30  
 4-wheel drive: £25 per person, plus an additional £40



**(a)** How much would it cost for 4 people to hire a family car for 1 day?



£..... (1 mark)

**(b)** How much would it cost for 3 people to hire a 4-wheel drive for 1 day?



£..... (1 mark)

**(c)** How much would it cost for 2 people to hire a 4-wheel drive for 2 days?



£..... (1 mark)

## NUMBER MACHINES

**A2**



**(a)** What is the output when the input is 2? ..... (1 mark)

**(b)** What is the output when the input is 42? ..... (1 mark)

**(c)** What is the input when the output is 14? ..... (1 mark)

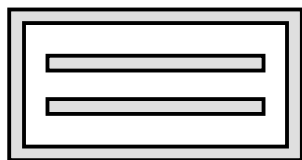
# Shape, Space & Measures

## SYMMETRY

**S5 (a)** How many lines of symmetry do each of these signs have?

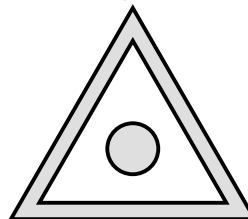


Sign 1



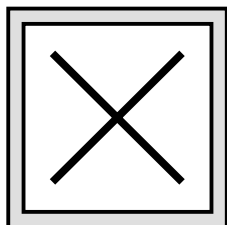
..... lines of symmetry

Sign 2



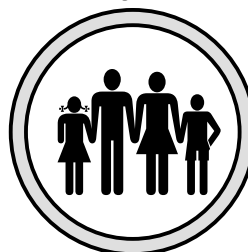
..... lines of symmetry

Sign 3



..... lines of symmetry

Sign 4



..... lines of symmetry

(4 marks)

**(b)** Complete these statements.



The order of rotational symmetry of sign 1 is .....

The order of rotational symmetry of sign 2 is .....

The order of rotational symmetry of sign 3 is .....

The order of rotational symmetry of sign 4 is .....

(4 marks)

**H2** Joanne is a striker for a non-league football team. She has kept a record of the number of goals she scored in the first 14 matches of the season.

3 0 2 0 2 3 0 1 0 2 3 0 3 2

**(a)** Find the modal number of goals that Joanne scored in the first 14 matches.



..... (2 marks)

**(b)** Do you think that Joanne's modal score would help her get a transfer to a better football club? Explain.

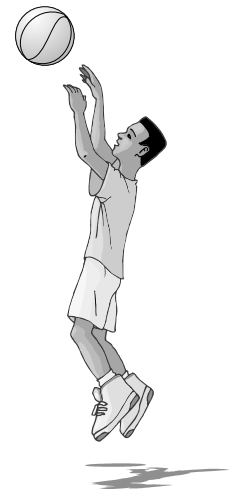


(1 mark)

**H3** The weights of 9 basketball players are shown below.

85 kg, 91 kg, 84 kg, 94 kg, 84 kg, 88 kg, 93 kg, 84 kg, 93 kg

**(a)** By putting the weights in order, find the median weight.



..... kg (2 marks)

**(b)** Find the mode of their weights.



..... kg (1 mark)

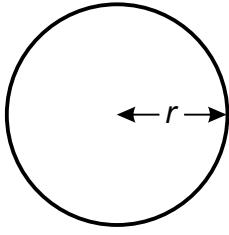
**(c)** Which of the averages is NOT a good indicator of the basketball players' average weight? Why?



(1 mark)

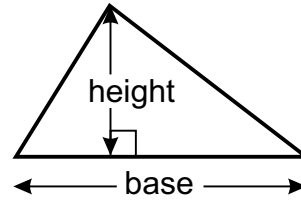
# Formulae Sheet

## AREA FORMULAE

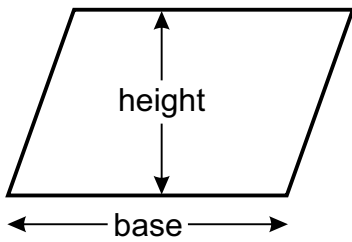


**Circle:**  $\pi r^2$

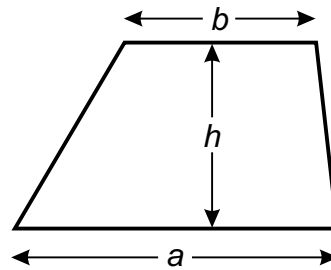
(use  $\pi = 3.14$  or your calculator button)



**Triangle:**  $\frac{\text{base} \times \text{height}}{2}$

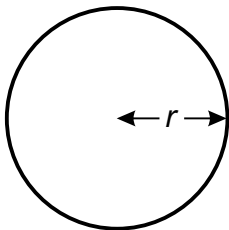


**Parallelogram:** base  $\times$  height



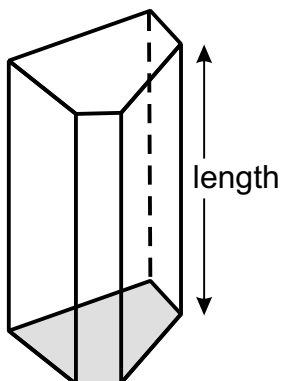
**Trapezium:**  $\frac{(a+b)}{2} \times h$

## LENGTH FORMULAE



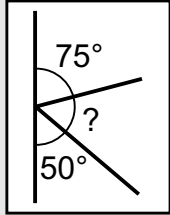



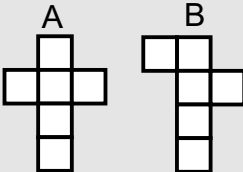
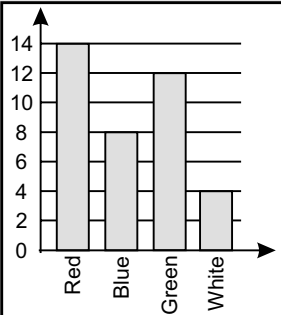
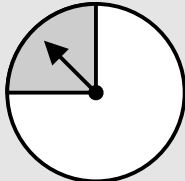

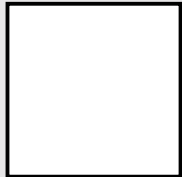
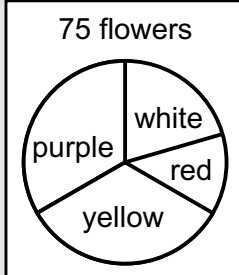
**Circle:** circumference =  $2\pi r$

## VOLUME FORMULAE



**Prism:** area of cross-section  $\times$  length

# Mental Arithmetic Answer Sheet

M1			M19	degrees	
M2			M20	°C	
M3	cm		M21		Red:  Blue: 
M4					
M5	degrees	52.7			
M6		$p + 31 = 45$	M22		0.3 0.03 0.2 0.31 0.303
M7					
M8	£		M23		
M9	cm				
M10	mins		M24		
M11					
M12			M25		$224 \div 4 = 56$
M13	%		M26	£	£1.99
M14	£	£40	M27		
M15		$x + x + x + x + x$			
M16			M28		
			M29		
			M30		
M17		$5b = 65$			
M18	mins	3.35pm 4.15pm			

