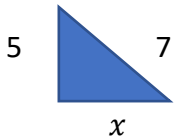


Answers to Revision Paper B

1	<p>Order the temperatures 15 16 17 17 18 19 20 22 24 25</p> <p>The median is 18.5, the quartiles are 17 and 22. The semi-interquartile range is $\frac{22-17}{2} = 2.5$</p> <p>On average temperatures are higher in July. Temperatures are more consistent in July (less varied). OR Temperatures are less consistent in August.</p>
2	$(3x + 5)(4x - 3) + 5x$ $= 12x^2 - 9x + 20x - 15 + 5x$ $= \mathbf{12x^2 + 16x - 15}$
3	$148\,300 \times 1.018^5 = 162136.219 = \mathbf{162100}$
4	<p>Gradient is $\frac{35-23}{17-11} = \frac{20}{5}$ The straight line is $y = 4x + 5.5 \rightarrow \mathbf{W = 4A + 5.5}$</p> <p>A lamb which is 5 weeks has an estimated weight of 25.5kg</p>
5	$9 - 2(x - 1) > 5, \quad 9 - 2x + 2 > 5, \quad -2x > -6, \quad x < 3, \quad x < 3$
6	$p = \frac{m + h^3}{2} \rightarrow 2p = m + h^3 \rightarrow 2p - m = h^3 \rightarrow \mathbf{h = \sqrt[3]{2p - m}}$
7	<p>SR is a tangent to the circle at S so SOR is a right-angled triangle.</p> <p>Triangle POS is isosceles where $\angle OPS = \angle OSP = 17^\circ$</p> <p>Angle PSR is $17^\circ + 90^\circ = 107^\circ$, angle QRS is $180^\circ - 17^\circ - 107^\circ = \mathbf{56^\circ}$</p>
8	$3f + 4r = 185 \quad 6f + 8r = 370 \quad r = 20, f = 35$ $2f + 3r = 130 \quad 6f + 9r = 390$ <p style="text-align: center;">A full pass is £35 and a restricted pass is £20</p>
9	$\frac{1}{x} - \frac{7}{x^2} = \frac{x}{x^2} - \frac{7}{x^2} = \frac{x - 7}{x^2}$
10	<p>Form a right-angled triangle</p> <div style="text-align: center;">  </div> <p>Using Pythagoras, $7^2 - 5^2 = 24$, $x = 4.9$ The width of chord AB is $2 \times 4.9 = \mathbf{9.8\text{ cm}}$</p>
11	$4x + 3y = 12, \quad 3y = -4 + 12, \quad y = -\frac{4}{3}x + 4. \quad \text{The gradient is } \mathbf{m = -\frac{4}{3}}$