

**National 4 Added Value Unit**

**Practice Paper B**

**Part 2**

Question	Points of Process or Accuracy	Expected responses
<b>1</b>	<ul style="list-style-type: none"> <li>Correct gathering of <math>x</math> terms</li> <li>Correct gathering of number terms</li> <li>Correct solution</li> </ul>	<ul style="list-style-type: none"> <li><math>7x</math></li> <li><math>7x = 28</math></li> <li><math>x = 4</math></li> </ul>
Correct answer only award 1/3		
<b>2</b>	# Overall strategy <ul style="list-style-type: none"> <li>Finds area of squares</li> <li>Correct radius for circle</li> <li>Finds area of two circles</li> <li>Total area found</li> </ul>	# Evidence of composite area including finding radius of SC <ul style="list-style-type: none"> <li><math>8 \times 8 \times 5 = 320</math></li> <li><math>r = 4</math></li> <li><math>3 \cdot 14 \times 4^2 \times 2 = 100 \cdot 48</math></li> <li><math>420 \cdot 48 \text{ cm}^2</math> [accept any rounding]</li> </ul>
Correct answer only award 1/4 (operational mark)		
<b>3(a)</b>	<ul style="list-style-type: none"> <li>Table completed</li> </ul>	<ul style="list-style-type: none"> <li>16, 20, 36</li> </ul>
<b>(b)</b>	<ul style="list-style-type: none"> <li>Evidence of multiplier</li> <li>Correct formula</li> </ul>	<ul style="list-style-type: none"> <li>Evidence of <math>\times 4</math></li> <li><math>c = 4b - 4</math></li> </ul>
<b>(c)</b>	# equate to 64 <ul style="list-style-type: none"> <li>Solve</li> </ul>	# $64 = 4b - 4$ <ul style="list-style-type: none"> <li>17</li> </ul>
<b>4</b>	<ul style="list-style-type: none"> <li>Correct time interval</li> <li>Correct time conversion</li> <li>Uses correct formula</li> <li>Answer</li> </ul>	<ul style="list-style-type: none"> <li>5 hours 15 minutes</li> <li>5.25hrs</li> <li><math>50 \times 5 \cdot 25</math></li> <li>262.5 miles</li> </ul>
Correct answer only award 0/4		
<b>5</b>	# Right – angled strategy <ul style="list-style-type: none"> <li>Correct Pythagoras statement</li> <li>Correct length</li> <li>Correct rounding</li> </ul>	# know to use Pythagoras' theorem <ul style="list-style-type: none"> <li><math>30^2 - 16^2</math></li> <li>25.3771....</li> <li>23.4 m</li> </ul>
Correct answer only award 1/3 (operational mark)		
<b>6</b>	<ul style="list-style-type: none"> <li>Know to use sine ratio</li> </ul>	<ul style="list-style-type: none"> <li><math>\sin x^\circ</math></li> </ul>

	<ul style="list-style-type: none"> <li>State correct ratio</li> <li>Calculate angle</li> </ul> # valid conclusion with reason	<ul style="list-style-type: none"> <li><math>\sin x^\circ = 0.6/1.5</math></li> <li><math>23 \cdot 6^\circ</math> [accept any rounding]</li> </ul> # Meets regs since $23 \cdot 6 < 25$
Correct answer only award 0/3 and # 0/1		
<b>7(a)</b>	<ul style="list-style-type: none"> <li>4 points plotted on grid</li> <li>Further 2 points plotted on grid</li> </ul>	<ul style="list-style-type: none"> <li>Points plotted correctly</li> <li>Points plotted correctly</li> </ul>
<b>(b)</b>	<ul style="list-style-type: none"> <li>Line of best fit drawn</li> </ul>	<ul style="list-style-type: none"> <li>Acceptable line drawn</li> </ul>
<b>(c)</b>	# correct conclusion	# conclusion must be valid for line of best fit drawn
<b>8</b>	<ul style="list-style-type: none"> <li>Probability for first class</li> <li>Probability from bag 2</li> </ul> # correct conclusion with reason	<ul style="list-style-type: none"> <li><math>P = 18/24 = 3/4</math> (0.75)</li> <li><math>P = 21/30 = 7/10</math> (0.7)</li> </ul> # Tristan is not correct since $0.75 > 0.7$ [accept any valid explanation]
Correct answer only award 0/2 and #0/1		

**Total process and accuracy points for this test: 40**

**Total reasoning points for this test: 8**