

SMART EXAM RESOURCES

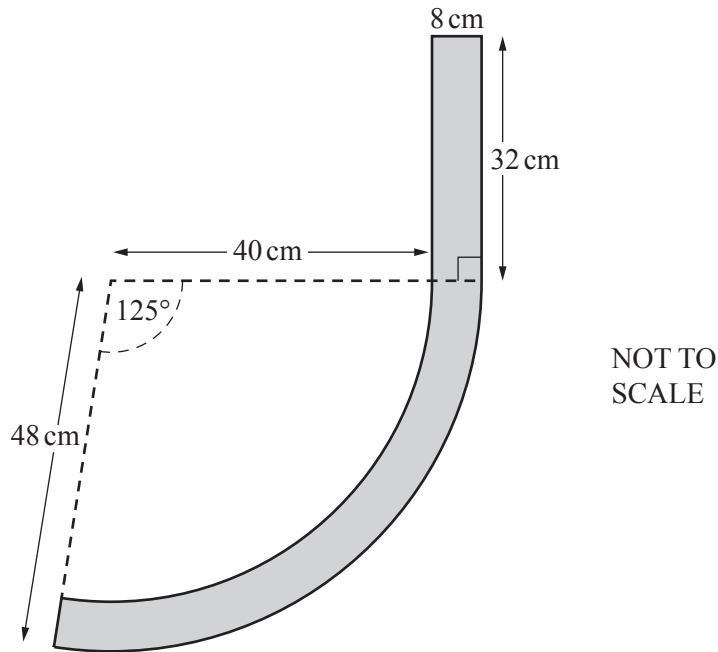
0580 EXTENDED MATH

TOPIC: NUMBERS

SUB-TOPIC: ROUNDING TO NEAREST SQUARE CENTIMETER

SET-1-QP-MS

1



The diagram shows the cross section of part of a park bench.  
It is made from a rectangle of length 32 cm and width 8 cm and a curved section.  
The curved section is made from two concentric arcs with sector angle  $125^\circ$ .  
The inner arc has radius 40 cm and the outer arc has radius 48 cm.

Calculate the area of the cross section correct to the nearest square centimetre.

..... cm<sup>2</sup> [5]

**MARK SCHEME:**

	1024 cao	<b>5</b>	<p><b>B4</b> for 1023 to 1024.0... or 1020 or</p> <p><b>M3</b> for <math>\frac{125}{360} \times \pi \times 48^2 - \frac{125}{360} \times \pi \times 40^2 + 32 \times 8</math> or</p> <p><b>M1</b> for <math>\frac{125}{360} \times \pi \times 48^2</math> or <math>\frac{125}{360} \times \pi \times 40^2</math> <b>and M1</b> for <math>32 \times 8 + k\pi</math></p> <p>If B0 scored <b>B1</b> for <i>their</i> more accurate decimal answer rounded correctly to an integer</p>
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