

Question	Answer	Mark	Mark scheme	Additional guidance
29	44.9	P1	<p>for process to find an expression for the area of the trapezium, eg <math>\frac{1}{2}(12 + CD)8</math> or <math>8 \times 12 + \frac{1}{2} \times 8 \times x</math></p> <p><b>or</b> for process to find the area of the triangle, eg <math>112 - 8 \times 12 (= 16)</math></p>	<p><math>x</math> is the length of the line from <math>C</math> to where perpendicular from <math>B</math> meets <math>CD</math></p> <p>Allow use of other letters in place of <math>CD</math> and <math>x</math> (do not have to be defined unless otherwise stated)</p> <p>Award P1 for <math>112 - 8 \times 12 (= 16)</math> even if not used</p>
		P1	<p>for forming an equation and isolating terms in the unknown length, eg <math>4CD = 112 - 48</math> <b>or</b> <math>\frac{1}{2} \times 8 \times x = 112 - 8 \times 12</math> <b>or</b> <math>\frac{1}{2} \times 8 \times x = "16"</math> <b>or</b> <math>CD = 16</math> <b>or</b> <math>x = 4</math></p>	<p>Award P2 for <math>CD = 16</math> or <math>x = 4</math> even if not used unless clearly from incorrect working eg <math>12 - 8 (= 4)</math></p> <p>Only award P2 for 16 if it is clearly identified as <math>CD</math></p>
		P1	<p>for start of process to find length of <math>BC</math>, eg <math>8^2 + "4"{}^2 (= 80)</math> <b>or</b> <math>8^2 + [\text{their } x]^2</math> <b>or</b> <math>\tan^{-1}\left(\frac{"4"}{8}\right) (= 26.5\dots)</math> <b>oe</b> <b>or</b> <math>\tan^{-1}\left(\frac{8}{"4"}\right) (= 63.4\dots)</math> where "4" can be [their <math>x</math>]</p>	<p>[their <math>x</math>] can be any value less than 12 or clearly identified as the length of the line from <math>C</math> to where perpendicular from <math>B</math> meets <math>CD</math> (may be seen on the diagram)</p>
		P1	<p>for <math>\sqrt{8^2 + "4"{}^2}</math> or <math>\sqrt{64 + "16"}</math> or <math>\sqrt{80}</math> or <math>4\sqrt{5} (= 8.9\dots)</math> <b>oe</b> or <math>\sqrt{8^2 + [\text{their } x]^2}</math> <b>or</b> <math>\frac{"4"}{\sin "26.5\dots"}</math> or <math>\frac{8}{\cos "26.5\dots"}</math> or <math>\frac{8}{\sin "63.4\dots"}</math> or <math>\frac{"4"}{\cos "63.4\dots"}</math> where "4" can be [their <math>x</math>]</p>	<p>Award P4 for <math>(BC =) \sqrt{80}</math> or <math>4\sqrt{5}</math> or 8.9... unless <math>x = 4</math> is clearly from incorrect working</p>
		A1	<p>for answer in the range 44.9 to 44.95</p>	<p>If an answer is shown in the range in working and then incorrectly rounded award full marks</p>