

Question	Working	Answer	Mark	Notes
<div>6 (a)</div>	<div> </div>		3	<div> B3 fully correct  B2 for 6 or 7 correct entries  B1 for 3, 4 or 5 correct entries </div>
<div>(b)</div>	<div> <math>11 - x + x - 4 + 18 - x + 3 + 4 + 2 + 3 + 5 = 35</math> </div>			<div> Allow 4,3 and 11 instead of <math>11 - x, x - 4, 18 - x</math>. </div>
<div>(c)(i)</div>		7	2	<div> M1 Sum of all their 8 values = 35  or “their 3” + “their 4” </div>
<div>(ii)</div>		19	2	<div> A1 </div>
<div>(d)</div>		10	2	<div> B1ft  B1 ft </div>
<div>(e)</div>		$\frac{5}{14}, \frac{3}{9}, \frac{1}{5}$	2	<div> B2 for all of <math>\frac{5}{14}, \frac{3}{9}, \frac{1}{5}</math>  B1 for 1 correct </div>
<div>(e)</div>	<div> <math>\frac{9}{14} \times \frac{6}{9} + \frac{5}{14} \times \frac{4}{5}</math> oe </div>			<div> M1 Correct method using their prob from tree diagram DO Not ISW </div>
		$\frac{5}{7}$	2	<div> A1 oe allow 0.71 or better </div>

Question	Working	Answer	Mark	Notes
7 (a)		The angle between a <u>radius</u> and a <u>tangent</u> is <u>90°</u>	1	B1 Oe
(b)	e.g. $\tan 27^\circ = \frac{OC}{12}$ or $\tan 63^\circ = \frac{12}{OC}$ $OC = 12 \tan 27^\circ$ or $OC = \frac{12}{\tan 63^\circ}$ (=6.11..)			M1 for correct use of trig
	$0.5 \times 12 \times 12 \tan 27^\circ$ oe	36.7 cm <sup>2</sup>	4	M1 correct equation for <i>OC</i> M1 A1 awrt 36.7 /36.8
(c)	$AOC = 126^\circ$ or <i>DOC</i> and <i>DOA</i> both marked or stated as $63^\circ$			M1 $0.5 \times 126$
	for <u>angles</u> in a <u>triangle</u> total $180^\circ$ , $EOC = AOE$ as $AO = CO$ , $EA = EC$ and $EO$ is a common side and <u>angle at centre</u> is twice angle at <u>circumference</u> . oe	$63^\circ$ Correct reasons for their method	4	A1 B2 (B1 for one correct reason)
(d)	$180 - "63"$ or $0.5 \times (360 - 2 \times "63")$	117°	2	M1 $180 - \text{their (c)}$ A1
(e)	<div> <div> <math>OCB = 90 - 59</math>                (31)             </div> <div> <math>BAC = 59</math>  <math>OAC = (180 - 2 \times "63") \div 2</math>                (=27)             </div> <div> <math>reflex AOC = 360 - 2 \times "63"</math>                (=234)  <math>OCB = 90 - 59</math>                (=31)             </div> </div> <div> <math>BAO = "63" - 31</math> </div> <div> <math>BAO = 59 - "27"</math> </div>	$360 - "63" - "234" - "31"$		M1 1 of the angles. May be on diagram M1
		32°	3	A1