

SOHCAHTOA Trigonometry Past Paper Answers Edexcel Maths IGCSE
Higher- Calculator

1.

Use of sine or $\frac{\sin x}{3.4} = \frac{\sin 90}{5.8}$			M1 Sine must be selected for use.
$\sin "x" = 3.4 / 5.8 (=0.586..)$	35.9	3	M1 A1 (35.888...)Use isw on awrt 35.9

2.

(a) $7.9 \times \cos 38^\circ$ or $7.9 \times \sin 52^\circ$	6.23	3	M2 M1 for $\cos 38^\circ$ or $\sin 52^\circ$ selected A1 6.2252... awrt 6.23
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3.

Question	Working	Answer	Mark	Notes
7	$(CD^2 =) \sqrt{8.3^2 - 4.7^2}$ or $\sqrt{68.89 - 22.09}$ or $\sqrt{46.8}$		4	M1
	$(CD =) 6.841...$			A1 for value which rounds to 6.8 (6.84105...)
	$\tan \angle ABC = \frac{6.84}{7.5}$ or $\tan \angle ABC = 0.912$			M1 dep on first M1
		42.4		A1 for awrt 42.4 (42.3692...)
				Total 4 marks

4.

Question	Working	Answer	Mark	Notes
8	$\sin 43$ used $7.8 \sin 43^\circ$		3	M1 or M1 for $7.8 \cos 43^\circ$ (5.704...) and $7.8^2 - 5.704^2$ (28.298) M1 for $\sqrt{28.298}$
		5.32		or M1 for correct statement of Sine Rule eg $\frac{7.8}{\sin 90^\circ} = \frac{x}{\sin 43^\circ}$ M1 for correct expression for x eg $x = \frac{7.8 \sin 43^\circ}{\sin 90^\circ}$
				A1 for ans rounding to 5.32 (5.319587...)
				Total 3 marks

5.

Question	Working	Answer	Mark	Notes
5. (a)	$15^2 - 10^2$ or $225 - 100$ or 125		3	M1
	$\sqrt{125}$ or $5\sqrt{5}$			M1 dep on M1
		11.2		A1 awrt 11.2
5. (b)	$\tan C = \frac{10}{12.5}$ or $\tan C = 0.8$		3	M1
	$\tan^{-1}\left(\frac{10}{12.5}\right)$ oe			M1
		38.7		A1 Accept 38.6(5980825.....) rounded or truncated to at least 3 SF.
Total 6 marks				

6.

	$\tan ACB = \frac{4.5}{9.6}$			M1 for correct trig statement eg. $\sin ACB = \frac{4.5}{\sqrt{112.41}}$ or $\cos ACB = \frac{9.6}{\sqrt{112.41}}$
	$\tan^{-1}\left(\frac{4.5}{9.6}\right)$			M1 dep
		25.1	3	A1 awrt 25.1
Total 3 marks				

7.

	$20^2 - 10^2 (= 300)$ $BD = \frac{\sqrt{300}}{2} (= 8.66\dots)$ $AD^2 = 10^2 + (0.5 \times \text{their } BC)^2$	13.2	4	M1 M1 M1 (indep) A1 for answer in the range 13.2 – 13.25
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8.

Question	Working	Answer	Mark	Notes
8. (a)	$(QR^2 =) 10.6^2 - 5.9^2 (= 77.55)$	8.81	3	M1 for squaring and subtracting.
	$(QR =) \sqrt{10.6^2 - 5.9^2}$ or $\sqrt{77.55}$			M1 dep
				A1 for 8.806 – 8.81
8. (b)	E.g. $\sin R = \frac{5.9}{10.6}$ or $\cos R = \frac{8.81}{10.6}$ or $\tan R = \frac{5.9}{8.81}$	33.8	3	M1 correct trig statement for angle PRQ or for angle QPR
	E.g. $\sin^{-1}\left(\frac{5.9}{10.6}\right)$ or $\cos^{-1}\left(\frac{8.81}{10.6}\right)$ or $\tan^{-1}\left(\frac{5.9}{8.81}\right)$			M1 complete method to find angle PRQ
				A1 for 33.8 – 33.82125
8. (c)		12.45	1	B1 12.45 or 12.449

9.

$14^2 - 10^2 (= 96)$	11	4	M1
"96"+ $5^2 (= 121)$			M1
$\sqrt{"121"}$			M1
			A1

10.

Question	Working	Answer	Mark	Notes
10	<p>Alternative mark scheme – working with AC and then triangle ABC</p> <p>E.g. $\cos 20 = \frac{13}{AC}$</p> <p>E.g. $(AC =) \frac{13}{\cos 20}$ or 13.8(3...)</p> <p>E.g. $(AB =) \sqrt{13.8^2 + 8^2 - 2 \times 13.8 \times 8 \times \cos(110)}$ (=18.1(9..) or 18.2</p> <p>E.g. $\frac{\sin BAC}{8} = \frac{\sin 110}{"18.1"}$ or $8^2 = "13.8"^2 + "18.1"^2 - 2 \times "13.8" \times "18.1" \times \cos BAC$</p>	24.4	5	<p>M1 for a correct statement or equation including AC as the only variable E.g. $AC^2 = 13^2 + (13 \tan 20)^2$</p> <p>M1 for a correct method to find AC E.g. $\sqrt{13^2 + (13 \tan 20)^2}$</p> <p>M1 for a correct method to find AB</p> <p>M1 for a correct statement or equation including angle BAC as the only variable</p> <p>A1 for ans in range 24.3 - 24.41</p> <p>Award M4A0 for an answer in the range 44.3 – 44.41</p>