

10.2 Answers (Revision for TEST)

GCSE Mathematics Non-Right Angled Trigonometry

Answer 1

- (i) 0.766
- (ii) On graph : Vertical line from 50° , Horizontal line to 0.766
- (iii) -0.985
- (iv) On graph : Vertical line from 260° , Horizontal line to -0.985

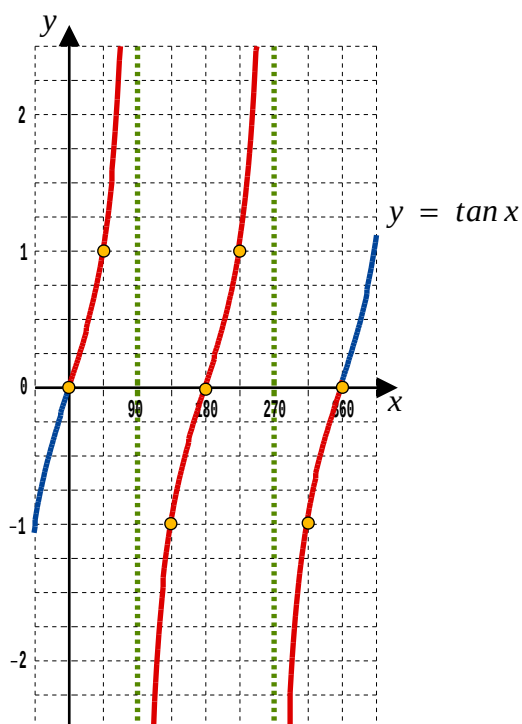
Answer 2

5.8284 must be to 4 decimal places

Answer 3

- (i) 128.8° must be to 1 decimal place
- (ii) 41.3° must be to 1 decimal place
- (iii) 25.0° must be to 3 significant figures
- (iv) 437 must be to 3 significant figures

Answer 4



Answer 5

- (i) Check r , u and m placed correctly on diagram.
- (ii) Check x , 31.2 , 29.4 and 115° correctly placed on diagram.
- (iii) Check star placed at R and U .
- (iv)
$$\frac{\sin R}{r} = \frac{\sin U}{u} = \frac{\sin M}{m}$$
- (v) 58.7° must be to 3 significant figures

Answer 6

- (i) 7.99 cm
(ii) 39.14 cm^2

Answer 7

55.7°

Answer 8

- (i) 108°
(ii) Check sketch of triangle
(iii) $a = BC = 13.5 \text{ cm}$
(iv) $c = AB = 7.40 \text{ cm}$

Answer 9

17.7 cm

Answer 10

(i)

<i>n</i>	3	4	5	6	7	8	9	10	11	12
<i>A</i>	8.1	12.5	14.9	16.2	17.1	17.7	18.1	18.4	18.6	18.8

- (ii) Graph's scales numbered and labelled.
(iii) $\text{Area} \rightarrow \pi r^2$ That is, 19.6, as the polygon becomes more like a circle

Answer 11

$180 - 74.4 = 146^\circ$ Bearing given to nearest degree

Answer 12

- (i) Both are the area of the same triangle, $\triangle ABC$
(ii)

$$\frac{1}{2} ab \sin C = \frac{1}{2} bc \sin A$$

$$ab \sin C = bc \sin A \quad \text{multiply both sides by 2}$$

$$a \sin C = c \sin A \quad \text{divide both sides by } b$$

$$\sin C = \frac{c \sin A}{a} \quad \text{divide both sides by } a$$

$$\frac{\sin C}{c} = \frac{\sin A}{a} \quad \text{divide both sides by } c$$

- (iii) 66.5°
(iv) 113.5°

This document is a part of a **Mathematics Community Outreach Project** initiated by Shrewsbury School

It may be freely duplicated and distributed, unaltered, for non-profit educational use

In October 2020, Shrewsbury School was voted "**Independent School of the Year 2020**"

© 2025 Number Wonder

Teachers may obtain detailed worked solutions to the exercises by email from MHHShrewsbury@Gmail.com