

Math 06, Trigonometry Test II
10:00 - 10:45

These ten questions are worth 5 points each. To get all 5 points it is very important that you show clearly all your working out and reasoning. Put a box around the answer.

Q1. Express 4 radians in degrees, correct to one place.

Q2. Express 150° as an exact number of radians.

Q3. In a circle of radius 15 cm find the arc length determined by a central angle $\theta = 150^\circ$, correct to two decimal places.

Q4. In a circle of radius 15 cm find the sector area determined by a central angle $\theta = 150^\circ$, correct to two decimal places.

Q5. Give the exact coordinates of the point $P(x, y)$ on the unit circle corresponding to an angle of $\theta = -3\pi$ and give the cosine, sine and tangent of this angle.

Q6. Find $\sin \frac{2\pi}{3}$ exactly.

Q7. Find all values of θ , where $0 \leq \theta \leq 2\pi$, that make $\cos \theta = 0$.

Q8. Complete this table of values for $y = -2 \sin x$

x	$\sin x$	$-2 \sin x$
$-\pi/2$		
0		
$\pi/2$		
π		
$3\pi/2$		
2π		

Q9. For $y = -2 \sin x$, sketch the graph for $-\pi/2 \leq x \leq 2\pi$ and give the amplitude.

Q10. Verify the identity:

$$\frac{\sin \theta \sec \theta}{\tan \theta} = 1$$