

C11 - 2.0 - Trig Review

All angles are in standard position unless otherwise stated.

1) Find θ_r .

- a) 120°
- b) 240°
- c) 345°
- d) 360°
- e) 5000°

2) Find θ_{stp} ;

$$0 \leq \theta < 360.$$

- a) 60° QII
- b) 40° QIV
- c) 15° Q4
- d) 12.5° QIII
- e) 180°
- f) -20° QIV

3) Find $\pm\theta_{cot}$.

- a) 60°
- b) -140°
- c) 180°
- d) 2000°

4) Find θ_{pri} .

- a) 60°
- b) 540°
- c) 1000°
- d) 720°
- e) 2000°

5) Find on Calculator.

- a) $\sin 130^\circ = ?$
- b) $\cos 125^\circ = ?$
- c) $\tan(-34^\circ) = ?$

6) Find without Calc.
(Special Triangles)

- a) $\sin 30^\circ = ?$
- b) $\cos 315^\circ = ?$
- c) $\tan 120^\circ = ?$

7) Find without Calc.

- a) $\sin 30^\circ + \cos 60^\circ = ?$
- b) $\cos^2 45^\circ = ?$
- c) $\sin 120^\circ - 2\cos 45^\circ = ?$

8) Find θ_{stp} on Calc

$$0 \leq \theta < 360.$$

(Inverse/Algebra/GraphCalc)

- a) $\sin \theta = -0.4$
- b) $5\cos \theta - 3 = 1$
- c) $\sin \theta + \cos \theta = 0$
- d) $\cos \theta = 3$

9) Find θ_{stp} w/out Calc ;

$$0 \leq \theta < 360.$$

- a) $\sin \theta = -\frac{\sqrt{2}}{2}$
 - b) $\sqrt{3}\tan \theta = -1$
 - c) $\cos^2 \theta = \frac{3}{4}$
 - d) $\cos^3 \theta = -\frac{1}{8}$
- $\sin \theta = 2$

10) Find θ_{stp} on Calc ;

$$-180 \leq \theta < 540$$

- a) $\sin \theta = -0.6$

11) Find θ_{gen} w/out Calc.

- a) $\sin \theta = -\frac{1}{\sqrt{2}}$
- b) $\tan \theta = -1$

12) Find w/out Calc.

(Unit Circle)

- a) $\sin 90^\circ = ?$
- b) $\cos(-180^\circ) = ?$
- c) $\tan 360^\circ = ?$
- d) $\tan 90^\circ = ?$

13) Find θ_{stp} w/out Calc;

$$0 \leq \theta < 360.$$

- a) $\sin \theta = 0$
- b) $\sin^2 \theta = 1$
- c) $\cos \theta + 1 = 2$
- d) $\tan \theta = \text{und}$

14) Find θ_{stp} w/out Calc ;

$$-180 \leq \theta < 540$$

- a) $\sin \theta = 1$
- b) $\tan \theta = 0$

15) Find θ_{gen} w/out calc.

- a) $\sin \theta = -1$
- b) $\tan \theta = \text{und}$
- c) $\cos \theta = 0$

16)

- a) Find $\sin \theta$ if $\cos \theta = \frac{3}{5}$
- b) Find $\cos \theta$ if $\tan \theta = 1.25$

17) Solve for θ .

$$0 \leq \theta < 360.$$

- a) $\sin 151^\circ = \sin \theta$
- b) $\tan 244^\circ = \cos \theta$

18) Find x .

$$0 \leq x < 90.$$

- a) $\sin 30^\circ = \cos x^\circ$
- b) $\cos 0^\circ = \sin x^\circ$

19) Find θ_{stp} ; $0 \leq \theta < 360$

& θ_{gen} w/out Calc.

(Period Change)

- a) $\sin 2\theta = 0$
- b) $\sin 2\theta = \frac{1}{2}$

20) Find θ_{stp} .

$$0 \leq \theta < 360.$$

(Substitution/Factoring/...)

- a) $\sin \theta + \sin \theta = 1$
- b) $1 + 6\cos \theta = 2\cos \theta + 9$
- c) $\frac{\tan \theta}{\tan \theta + 1} = -2$

21) Find θ_{stp} .

$$0 \leq \theta < 360.$$

- a) $\sin \theta + \sin \theta \cos \theta = 0$
- b) $\sin^2 \theta + \sin \theta - 2 = 0$
- c) $2\sin^2 \theta + \sin \theta - 1 = 0$
- d) $3\cos^2 \theta - 8\cos \theta - 5 = 0$

Thetas
Calculator
Special Triangles
Algebra
Unit Circle
Period Change
Substitution
Factoring
NPV's
Points
Graphing
ArcLength/Area
Angular Velocity

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22) Find Non-Permissible Values/Restrictions & Asymptotes.

$$0^\circ \leq \theta < 360^\circ, \text{ \& } \theta_{gen}.$$

- $\frac{1}{\sin\theta}$
- $\frac{1}{\tan\theta}$
- $\frac{1}{\cos\theta + 1}$
- $\frac{1}{\cos^2 x - 1}$
- $\frac{1}{\sin^2 \theta + 1}$
- $\frac{1}{\sin\theta - \frac{1}{2}}$
- $\frac{1}{\tan\theta + 1}$
- $\frac{1}{4\cos^2 \theta - 1}$

23) Is the point on the unit circle?

- $(\frac{1}{4}, \frac{\sqrt{15}}{4})$
- $(\frac{1}{2}, \frac{1}{2})$
- $(0,1)$

24) Solve the point on the unit circle.

- $(\frac{1}{4}, y)$ QI
- $(x, \frac{1}{2})$ QII

25) Find $\sin\theta$, $\cos\theta$, and $\tan\theta$ for the following points and find θ_{stp} .

$$0 \leq \theta < 360^\circ$$

- $(-4,3)$

26) Solve the point on the unit circle. w/out calc.

- $p(60^\circ) = ?$
- $p(225^\circ) = ?$
- $p(180^\circ) = ?$

27) (m, n) QI is the Intersection of the Terminal arm and the Unit-Circle. Find, $\sin\theta$, $\cos\theta$, $\tan\theta$.

28) (p, q) QIV is the Intersection of the Terminal arm and the Unit-Circle. Find $\cos\theta$ and $\sin\theta$.

29) The terminal arm is 10 units and $\sin\theta = \frac{3}{5}$, in QII, Find the Intersection Point of the Terminal arm and the Unit-Circle

30) Find θ if $\sin\theta = \cos\theta$
 $0 \leq \theta < 360$.

31) Find $\cos\theta$ & $\tan\theta$ if $\sin\theta = -\frac{1}{\sqrt{2}}$; , QIV.

32) Find $\sin\theta$, $\cos\theta$, & $\tan\theta$
If: $2x + 3y = 0, x \geq 0$.

33) Find two other trig ratios equal to $\sin 225$.

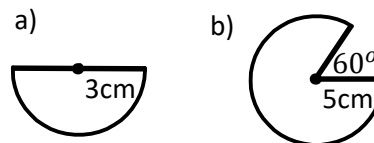
34) Graph.
a) $y = \sin\theta$
b) $y = \cos\theta$
c) $y = \tan\theta$
On top of each other (Not same Graph)

35)

- Find the arc length. $\theta = 60^\circ, r = 5$.
- Find the radius. $\theta = 60^\circ, arc = 10$.

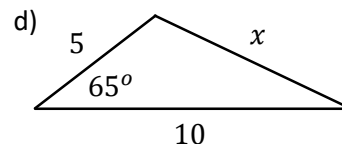
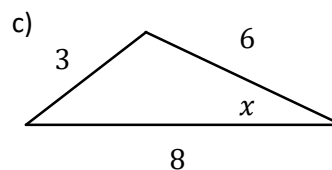
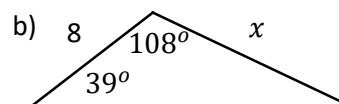
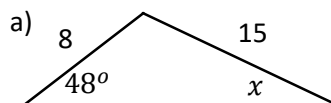
36) Find the Sector Area. $\theta = 60^\circ, r = 5$

37) Find the Perimeter and Area



38) Find the angular velocity of a wheel travelling 25.13 meters per second if the radius 2 meters.

39) Solve for x



40) How many triangles?

- $\angle A = 30^\circ, b = 10, a = 5$
- $\angle A = 30^\circ, b = 10, a = 4$
- $\angle A = 30^\circ, b = 10, a = 12$
- $\angle A = 30^\circ, b = 10, a = 6$
- $\angle A = 120^\circ, b = 8, a = 10$
- $\angle A = 120^\circ, b = 8, a = 4$