

Test Review - Pre-Calculus
Trig Unit 1

Name _____

1.) KNOW THE TRIG VALUES FOR ALL SPECIAL ANGLES BY MEMORY!!

In degrees...

a) $\sin 30^\circ$ b) $\sin 45^\circ$ c) $\cos 30^\circ$ d) $\cos 60^\circ$ e) $\tan 45^\circ$ f) $\tan 60^\circ$

g) $\sec 30^\circ$ h) $\csc 30^\circ$ i) $\cot 45^\circ$ j) $\sin 60^\circ$ k) $\cot 30^\circ$ l) $\tan 30^\circ$

...and in radians

a) $\sin \frac{\pi}{6}$ b) $\sin \frac{\pi}{4}$ c) $\cos \frac{\pi}{6}$ d) $\cos \frac{\pi}{3}$ e) $\tan \frac{\pi}{4}$ f) $\tan \frac{\pi}{3}$

g) $\sec \frac{\pi}{6}$ h) $\csc \frac{\pi}{6}$ i) $\cot \frac{\pi}{4}$ j) $\sin \frac{\pi}{3}$ k) $\cot \frac{\pi}{3}$ l) $\tan \frac{\pi}{6}$

2) Convert each angle in degrees to radians. Express your answer as a multiple of π .

a) 120° b) 225° c) 300° d) -90°

3) Convert each angle in radians to degrees.

a) $\frac{3\pi}{4}$ b) $\frac{2\pi}{3}$ c) $-\frac{5\pi}{6}$ d) $\frac{9\pi}{4}$

4) Name two angles, one positive and one negative, that are coterminal with each of the following:

a) -206° b) 225° c) $\frac{5\pi}{3}$ d) $\frac{9\pi}{4}$ e) 540°

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5) Find the reference angle:

a) 210° b) 300° c) -135° d) -10°

e) $\frac{4\pi}{3}$ f) $\frac{9\pi}{4}$ g) $\frac{-\pi}{4}$ h) $\frac{5\pi}{6}$

6) For $\theta = \frac{\pi}{2}$ find:

a) $\sin \theta$ b) $\cos \theta$ c) $\tan \theta$ d) $\csc \theta$ e) $\sec \theta$ f) $\cot \theta$

7) For $\theta = 180^\circ$ find:

a) $\sin \theta$ b) $\cos \theta$ c) $\tan \theta$ d) $\csc \theta$ e) $\sec \theta$ f) $\cot \theta$

8) For $\theta = \frac{3\pi}{2}$ find:

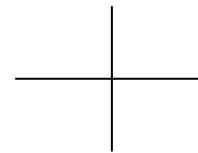
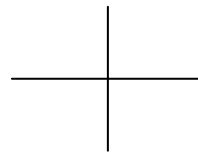
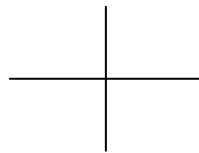
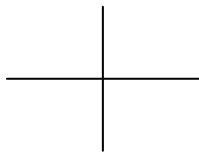
a) $\sin \theta$ b) $\cos \theta$ c) $\tan \theta$ d) $\csc \theta$ e) $\sec \theta$ f) $\cot \theta$

9) Give the measure (in radians) of a quadrant angle.

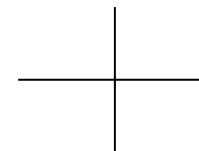
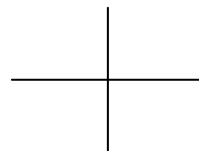
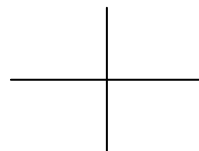
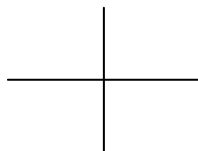
10) Give the measure (in degrees) of a quadrant angle.

11) Sketch θ in standard position. Show the direction of rotation.

a) $\theta = 170^\circ$ b) $\theta = 300^\circ$ c) $\theta = -110^\circ$ d) $\theta = -200^\circ$



e) $\theta = -560^\circ$ f) $\theta = \frac{7\pi}{6}$ g) $\theta = \frac{3\pi}{4}$ h) $\theta = \left(-\frac{5\pi}{3}\right)$



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12) Determine the quadrant in which θ lies.

a) $\theta = -160^\circ$

b) $\theta = \frac{7\pi}{4}$

c) $\theta = \frac{5\pi}{6}$

d) $\theta = \frac{5\pi}{4}$

e) $\theta = 15^\circ$

f) $\theta = \left(-\frac{2\pi}{3}\right)$

13) Find the value of each of the following trig ratios.

a) $\sin(-30^\circ)$

b) $\cos\left(-\frac{\pi}{4}\right)$

c) $\tan \frac{7\pi}{3}$

d) $\csc \frac{3\pi}{4}$

e) $\sin 315^\circ$

f) $\cot 210^\circ$

g) $\sin \frac{11\pi}{6}$

h) $\cos \frac{5\pi}{4}$

i) $\sec \frac{5\pi}{6}$

j) $\cot \frac{7\pi}{4}$

k) $\tan 120^\circ$

l) $\sec(-150^\circ)$

m) $\sin 135^\circ$

n) $\cos 3\pi$

o) $\csc(-\pi)$

p) $\tan\left(-\frac{\pi}{2}\right)$

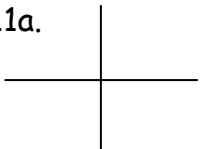
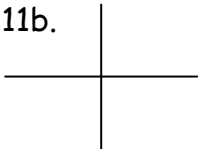
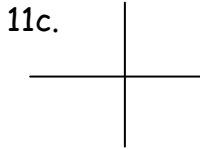
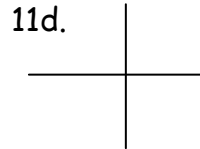
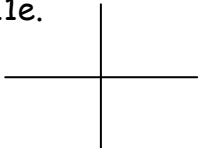
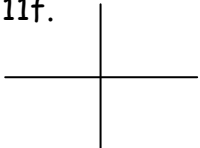
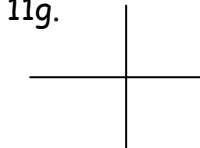
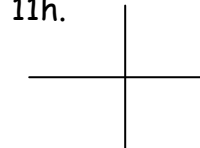
14) Name a quadrant III angle with reference angle of 10° .

15) Name a quadrant II angle with reference angle of 50° .

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Answer Key

1a. $\frac{1}{2}$	1b. $\frac{\sqrt{2}}{2}$	1c. $\frac{\sqrt{3}}{2}$	1d. $\frac{1}{2}$	1e. 1	1f. $\sqrt{3}$
1g. $\frac{2\sqrt{3}}{3}$	1h. 2	1i. 1	1j. $\frac{\sqrt{3}}{2}$	1k. $\sqrt{3}$	1l. $\frac{\sqrt{3}}{3}$
1a. $\frac{1}{2}$	1b. $\frac{\sqrt{2}}{2}$	1c. $\frac{\sqrt{3}}{2}$	1d. $\frac{1}{2}$	1e. 1	1f. $\sqrt{3}$
1g. $\frac{2\sqrt{3}}{3}$	1h. 2	1i. 1	1j. $\frac{\sqrt{3}}{2}$	1k. $\frac{\sqrt{3}}{3}$	1l. $\frac{\sqrt{3}}{3}$
2a. $\frac{2\pi}{3}$	2b. $\frac{5\pi}{4}$	2c. $\frac{5\pi}{3}$	2d. $\left(-\frac{\pi}{2}\right)$	3a. 135°	3b. 120°
3c. -150°	3d. 45°	4a. 154° -566°	4b. 585° -135°	4c. $\frac{11\pi}{3}$, $\left(-\frac{\pi}{3}\right)$	4d. $\frac{17\pi}{4}$, $\left(-\frac{7\pi}{4}\right)$
4e. 180° -180°	5a. 30°	5b. 60°	5c. 45°	5d. 10°	5e. $\frac{\pi}{3}$
5f. $\frac{\pi}{4}$	5g. $\frac{\pi}{4}$	5h. $\frac{\pi}{6}$	6a. 1	6b. 0	6c. undefine
6d. 1	6e. undefined	6f. 0	7a. 0	7b. -1	7c. 0
7d. undefined	7e. -1	7f. undefined	8a. -1	8b. 0	8c. undefine
8d. -1	8e. undefined	8f. 0	9. $\pi, \frac{3\pi}{2}$	10. $90^\circ, 180^\circ$	
11a. 	11b. 	11c. 	11d. 		
11e. 	11f. 	11g. 	11h. 		
12a. III	12b. IV	12c. II	12d. III	12e. I	12f. III
13a. $-\frac{1}{2}$	13b. $\frac{\sqrt{2}}{2}$	13c. $\sqrt{3}$	13d. $\sqrt{2}$	13e. $-\frac{\sqrt{2}}{2}$	13f. $\sqrt{3}$
13g. $-\frac{1}{2}$	13h. $-\frac{\sqrt{2}}{2}$	13i. $-\frac{2\sqrt{3}}{2}$	13j. -1	13k. $-\sqrt{3}$	13l. $-\frac{2\sqrt{3}}{3}$
13m. $\frac{\sqrt{2}}{2}$	13n. $\frac{\sqrt{3}}{2}$	13o. undefine	13p. undefined	14. 190°	15. 130°

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