Raffle Game

4.1-4.3, 5.5-5.6 Review

RAFFLE GAME

- Work the problems in your notebook. Most problems are calc OK.
- Write your name and the answer only on your raffle ticket.
- Turn in your ticket for each question on time to be eligible for each drawing!
- Drawings will be held every few questions. Spin the Prize Wheel to win!

Problem 1

Convert from degrees to radians. (NO CALC.)

$$100°$$

Convert from radians to degrees. (NO CALC)

$$\frac{59\pi}{18}$$

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Convert from degrees to radians. (NO CALC.)

$$100° \qquad 100°\left(\frac{\pi}{180}\right) = \frac{10\pi}{18} = \boxed{\frac{5\pi}{9}}$$
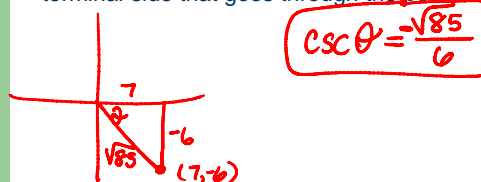
Convert from radians to degrees. (NO CALC)

$$\frac{59\pi}{18} \qquad \frac{59\pi}{18}\left(\frac{180°}{\pi}\right) = \boxed{590°}$$

Problem 2

Given the point (7, -6) on the coordinate axis, find the csc of the angle formed by the terminal side that goes through the point.

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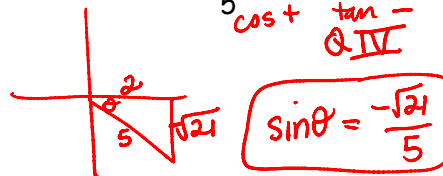
$$\csc\theta = \frac{-\sqrt{85}}{6}$$

Problem 3

Find $\sin\theta$ if $\cos\theta = \dfrac{2}{5}$ and $\tan\theta < 0$

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$\cos +$ $\tan -$

Q.IV

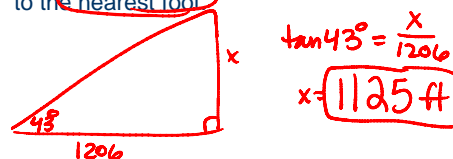$\sin\theta = \dfrac{-\sqrt{21}}{5}$

Problem 4

From a distance of 1206 feet from a spot light, the angle of elevation to the top of the light is 43 degrees. Find the height of the spot light to the nearest foot.

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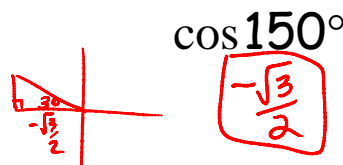
$\tan 43° = \dfrac{x}{1206}$

$x = 1125 \text{ ft}$

Problem 5

Find the exact value (no calc)

$$\cos 150°$$

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Find the exact value (no calc)

$$\cos 150°$$

$\dfrac{-\sqrt{3}}{2}$

Problem 6

Find the exact value (no calc)

$$\sin \frac{-5\pi}{4}$$

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Find the exact value (no calc)

$$\sin \frac{-5\pi}{4}$$

$$\boxed{\frac{\sqrt{2}}{2}}$$

Problem 7

Find the exact value (no calc)

$$\csc 225°$$

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Find the exact value (no calc)

$$\csc 225°$$
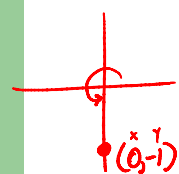
$$\boxed{\frac{-2}{\sqrt{2}}}$$

Problem 8

Find the exact value (no calc)

$$\cot \frac{3\pi}{2}$$

Problem 8

Find the exact value (no calc)

$$\cot \frac{3\pi}{2}$$

$$(0,-1) \qquad \frac{0}{-1} = \boxed{0}$$

Problem 9

What compass heading is closest to a bearing of 192 degrees?

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SSW (South-Southwest)

Problem 10

In $\triangle$ABC, find all possible measures, if any, of angle B.

a = 20, b = 22, A = 32 degrees

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a = 20, b = 22, A = 32 degrees

$$\frac{\sin 32}{20} = \frac{\sin B}{22}$$

$$\frac{22\sin 32}{20} = \sin B$$

$m\angle B \approx 35.7°$
$m\angle B \approx 144.3°$

$h = 22\sin 32°$
$\approx 11.7 \quad 2 \,\triangle S$

Problem 11

In Triangle MON, Angle O = 110 degrees, m = 10, and n = 8. Find o.

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$$o^2 = 10^2 + 8^2 - 2(10)(8)\cos 110°$$

$$o = 14.8$$

Problem 12

- Find the area of $\triangle ABC$ if
$a = 6,\ b = 18,\ and\ m\angle C = 60°$

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- Find the area of $\triangle ABC$ if $a = 6,\ b = 18,\ and\ m\angle C = 60°$

$$= \frac{1}{2}(18)(6)\sin 60°$$

$$\approx 46.8\ u^2$$

Problem 13

Find the area of Triangle BIG if b = 11, i = 9, and g = 4.

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Find the area of Triangle BIG if b = 11, i = 9, and g = 4.

$$s = \frac{11 + 9 + 4}{2} = 12$$

$$A = \sqrt{12(12 - 11)(12 - 9)(12 - 4)}$$

$$A = 17.0\ u^2$$