Math 41
Quiz 7
Due December 3 in class.

1. Use a calculator to approximate the ratio of the angle, round to three decimals.

a. $\cos 22^0 \approx$ $\boxed{0.927}$

b. $\sin 89^0 45' \approx$ $\boxed{0.9999} \rightarrow 1.0$

c. $\tan \frac{2\pi}{5} \approx$ $\boxed{3.0777}$

d. $\sec 110.5^0 \approx$ $\boxed{-2.855}$

e. $\csc \frac{5}{2} \approx$ $\boxed{0.389}$

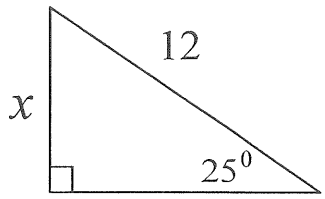
2. Find θ, $0^o < \theta < 90^o$ for each equation. Round to one decimal place.

a. $\tan \theta = 2$ $\boxed{\theta \approx 63.4^\circ}$

b. $\csc \theta = \frac{8}{5}$ $\boxed{\theta \approx 38.7^\circ}$

c. $\sin \theta = 0.125$ $\boxed{\theta \approx 7.2^\circ}$

3. Find side x of the right triangle.

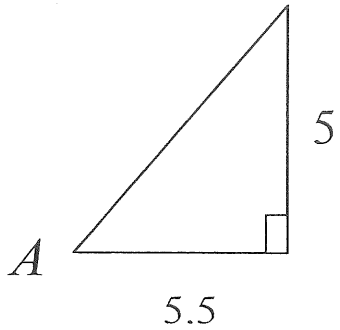


$\sin 25^\circ = \frac{x}{12}$

$12 \sin 25^\circ = x$

$\boxed{x \approx 5.1}$

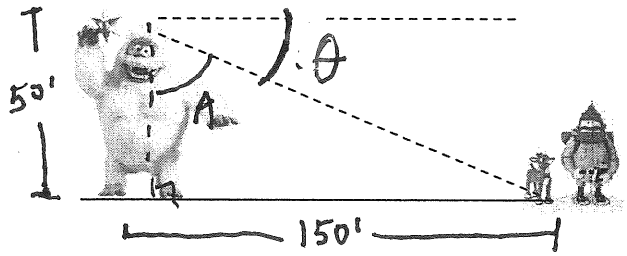
b. Find angle A in degrees rounded to one decimal.



$\tan A = \frac{5}{5.5}$

$\boxed{A \approx 42.3^\circ}$

5. Find the angle of depression, θ in degrees rounded to one decimal, from the top of a 50 abominable snowman to a point 150 feet
From his feet.



$\tan A = \frac{150}{50}$

$\angle A \approx 71.6^\circ$

$\theta = 90^\circ - \angle A$

$= 90^\circ - 71.6^\circ = 18.4^\circ$

$\boxed{\theta \approx}$

6. Use a calculator to approximate two values of θ in degrees $(0^\circ \le x < 360^\circ)$ that satisfy the equation. Round your answers to one decimal place.

$\sin x = -0.75$

Quadrants III, IV $\sin\theta < 0$

ref angle $\theta' = 48.6^\circ$

$\boxed{\begin{array}{l} x \approx \\ x \approx \end{array}}$

III $\theta = 180^\circ + 48.6 = 228.6^\circ$

IV $\theta = 360^\circ - 48.6^\circ = 311.4^\circ$