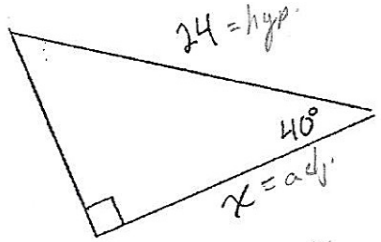
Pre-Calculus
Trig Review

Name
Date
A#

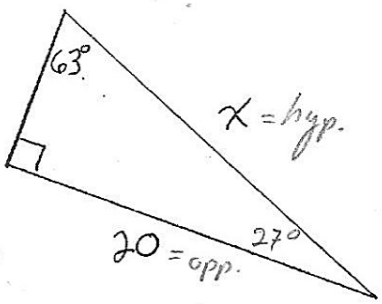
Find x and y. Write all answers to 3 decimal places.

① 

$\cos 40° = \frac{x}{24}$

$x = 24(\cos 40°)$

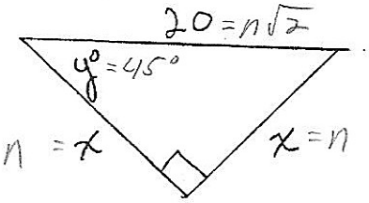
$x = 18.385$

② 

$\sin 63° = \frac{20}{x}$

$x \cdot \sin 63° = 20$

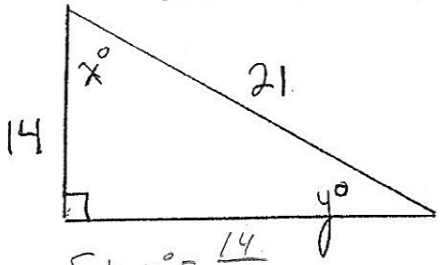
$x = \frac{20}{\sin 63°} = 22.447$

③ 

$20 = n\sqrt{2}$

$10\sqrt{2} = n$

$x = 10\sqrt{2} = 14.142$

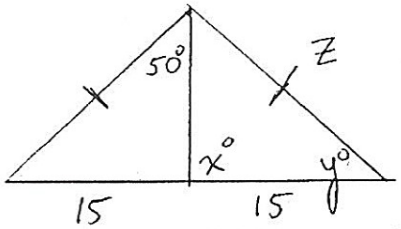
④ 

$x = 90 - y$

$x = 48.190$

$\sin y° = \frac{14}{21}$

$y° = \sin^{-1}\left(\frac{14}{21}\right) \approx 41.810$

⑤ 

$x = 90°$

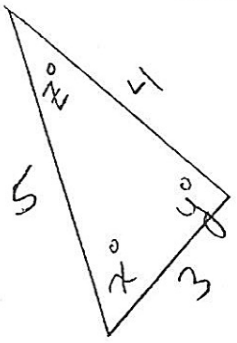
$y = 40°$

$\cos 40° = \frac{15}{z}$

$z \cdot \cos 40° = 15$

$z = \frac{15}{\cos 40°}$

$z = 19.581$

⑥ 

$y = 90°$

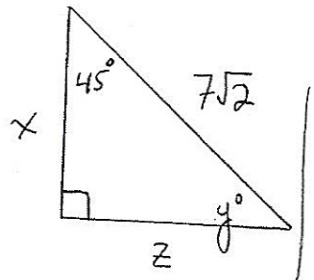
$\tan x° = \frac{4}{3}$

$x° = \tan^{-1}\left(\frac{4}{3}\right)$

$x° = 53.130$

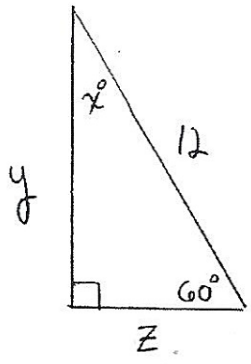
$z = 36.870$

(7)



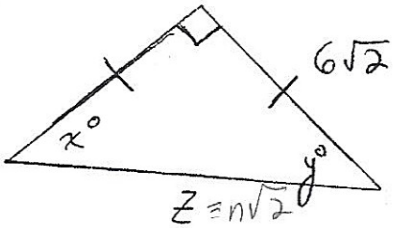
$y° = 45$
$x = 7$
$z = 7$

(8)



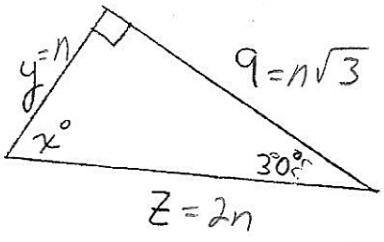
$x = 30°$
$z = 6$
$y = 6\sqrt{3}$

(9)



$x = 45°$
$y = 45°$
$z = 12$

(10)



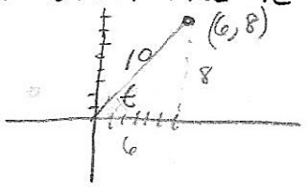
$9 = n\sqrt{3}$
$\frac{9}{\sqrt{3}} = n$
$3\sqrt{3} = n$

$y = 3\sqrt{3}$
$z = 6\sqrt{3}$
$x = 60°$

(11) a) Write the equation of a circle with a point $A(6,8)$ on the circle. and the origin as the center.

b) Consider the radius $\overline{AO}$. What is the angle measure that the radius makes with the x-axis?

a) $x^2 + y^2 = 100$



$\tan t° = \frac{8}{6}$

$t° = \tan^{-1}\left(\frac{8}{6}\right)$

$t° = 53.130$

(12) The Goodyear Blimp spots Candlestick park with an angle of depreciation of 7°. The pilot looks at the gps and notes that their vertical elevation is 4,000 ft. What is the blimps horizontal distance from the park?

$\tan 7° = \frac{4000}{x}$

$x \tan 7 = 4000$

$x = \frac{4000}{\tan 7} \approx 32,577$ ft