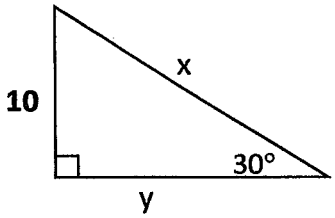
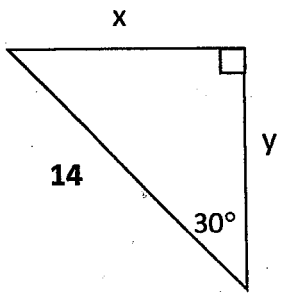
ALGEBRA II
QUIZ Review – SPEACIAL RIGHT TRIANGLES

NAME Key Hr. _____

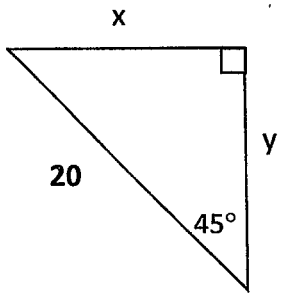
In 1 – 4, find the missing x and y values. No calculators.



1. X = 20
   Y = $10\sqrt{3}$

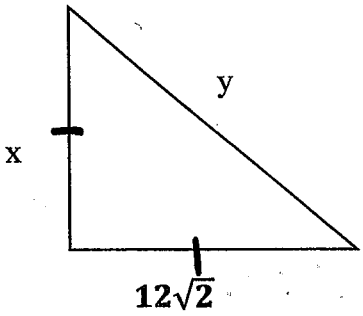


2. X = 7
   Y = $7\sqrt{3}$



3. X = $10\sqrt{2}$
   Y = $10\sqrt{2}$

$\frac{20}{\sqrt{2}}$



4. X = $12\sqrt{2}$
   Y = 24

$12\sqrt{2} \cdot 1\sqrt{2}$
$12\sqrt{4}$
$12 \cdot 2$
24

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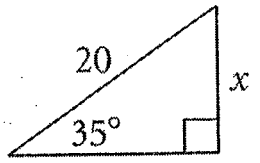
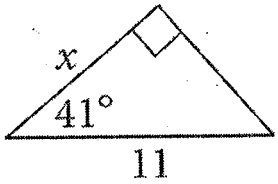
In 5, find the missing value of x.



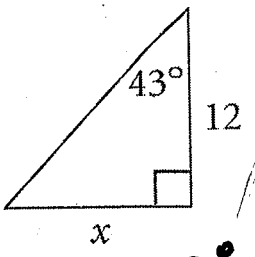
$\sin 35° = \frac{x}{20}$

$x = 11.5$



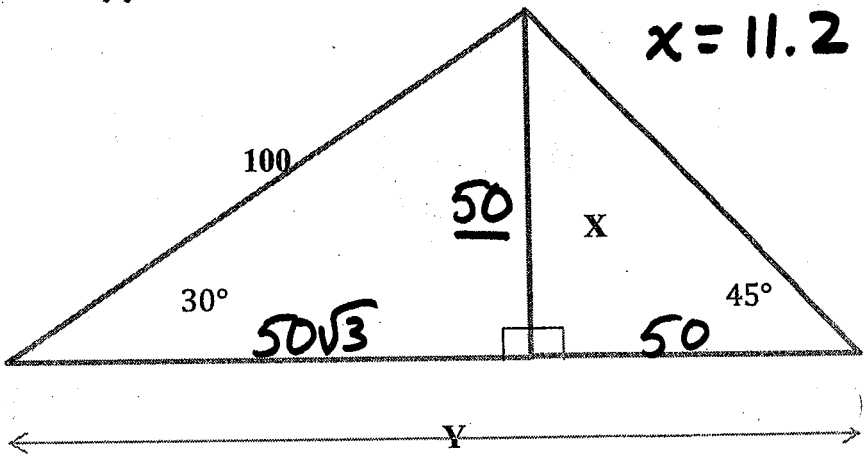
$\cos 41° = \frac{x}{11}$

$x = 8.3$



$\tan 43° = \frac{x}{12}$

$x = 11.2$

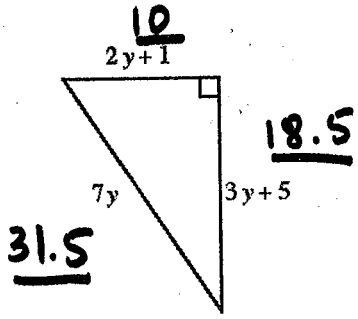


No Calculator (6.)

X = 50

Y = $50 + 50\sqrt{3}$

7. $P = 60$ in. Find the length of each side.



$2y+1+7y+3y+5=60$

$12y+6=60$

$12y=54$

$y=\frac{54}{12}=\frac{9}{2}=4.5$

ALGEBRA II NAME _____ Hr. _____

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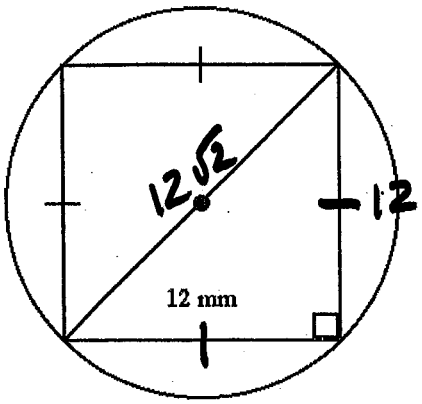
8. Find the exact circumference of the circle.



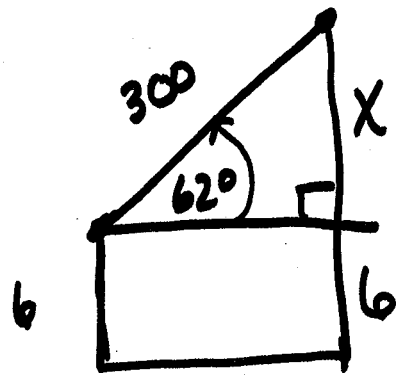
$C = 2\pi r$

$= 2\pi(6\sqrt{2}\text{ mm})$

$= 12\sqrt{2}\pi\text{ mm}$

Draw a triangle that represents the problem and solve the problem.

9. A kite string makes a 62^o angle with the horizontal, and 300ft of string is let out. The string is held 6 ft off the ground. How high is the kite?



$\sin 62° = \frac{x}{300}$

$x = 264.88$

$+ \quad 6$

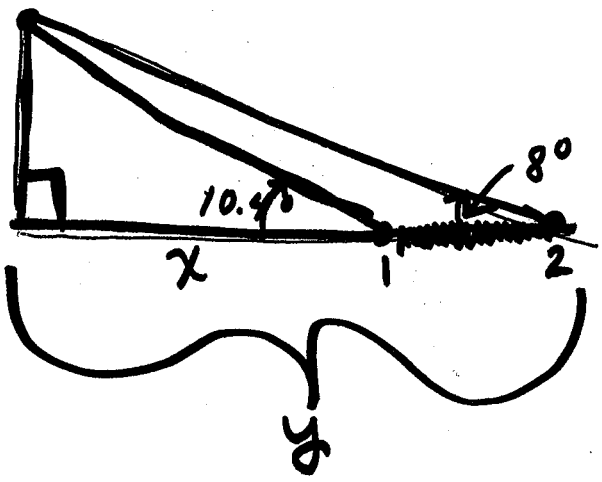
$= 271\text{ ft}$

10. Two horses are observed by a hang glider 80 meters above a meadow. The angles of depression are 10.4° and 8°. How far apart are the horses? 133.3 m

$\tan 8° = \frac{80}{y}$

$y = \frac{80}{\tan 8°}$

$y = 569.23\text{m}$



$\tan 10.4° = \frac{80}{x}$

$x = \frac{80}{\tan 10.4°}$

$x = 435.88\text{m}$