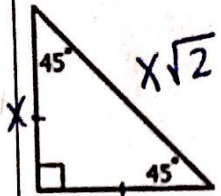


Main Ideas/Questions

Notes

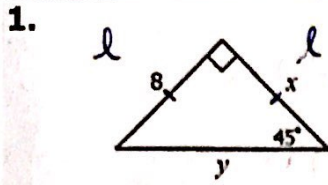
45°-45°-90°
Special Right Δ



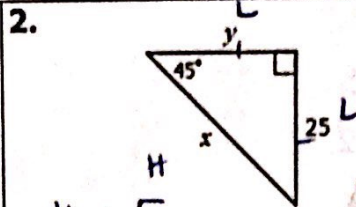
- Leg = $\frac{\text{hyp}}{\sqrt{2}}$
- Hypotenuse = $\text{leg}\sqrt{2}$

The legs of a 45°-45°-90° triangle are always congruent.

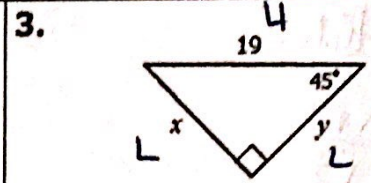
Practice! Find the value of each missing variable. Keep all answers in reduced radical form.



~~hyp = leg sqrt 2~~
hyp = leg sqrt 2
y = 8 sqrt 2
x = 8
y = 8 sqrt 2

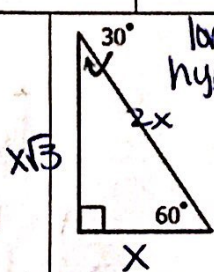


H = L sqrt 2
x = 25 sqrt 2
x = 25 sqrt 2
y = 25



hyp = leg sqrt 2
19 = x sqrt 2
19 sqrt 2 = x
x = 19 sqrt 2
y = 19 sqrt 2

30°-60°-90°
Special Right Δ

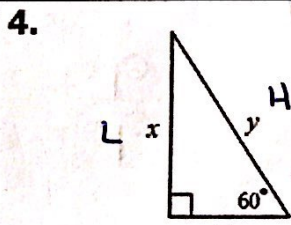


long = short sqrt 3
hyp = 2 * short

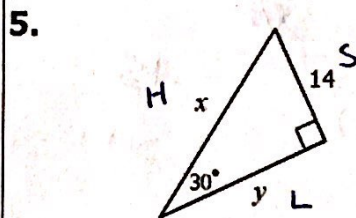
- Shorter Leg = ~~1/2~~
- Longer Leg = ~~1/2~~ short sqrt 3
- Hypotenuse = ~~1/2~~ 2 short

The shorter leg is always opposite the 30° angle and the longer leg is always opposite the 60° angle.

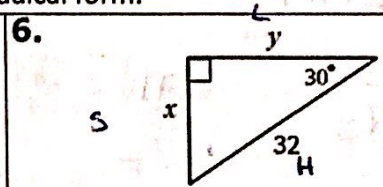
Practice! Find the value of each missing variable. Keep all answers in reduced radical form.



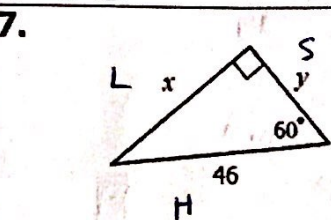
H = 2S
y = 2(5)
L = S sqrt 3
x = 5 sqrt 3
x = 5 sqrt 3
y = 10



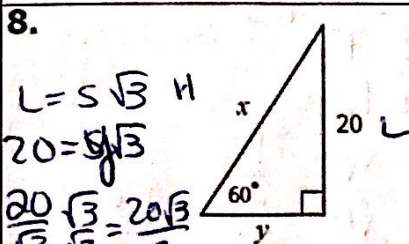
H = 2S
x = 2(14)
L = S sqrt 3
y = 14 sqrt 3
x = 28
y = 14 sqrt 3



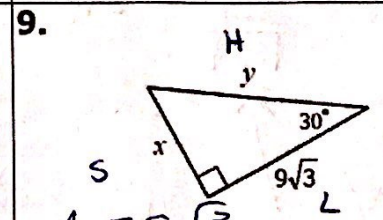
H = 2S
32 = 2x
L = S sqrt 3
y = 16 sqrt 3
x = 16
y = 16 sqrt 3



H = 2S
46 = 2y
L = S sqrt 3
x = 23 sqrt 3
y = 23



L = S sqrt 3
20 = S sqrt 3
20 sqrt 3 / sqrt 3 = 20 sqrt 3 / 3
S = 20 sqrt 3 / 3
x = 40 sqrt 3 / 3
y = 20 sqrt 3 / 3
H = 2S
x = 2(20 sqrt 3 / 3)



L = S sqrt 3
9 sqrt 3 = x sqrt 3
9 = x
H = 2S
y = 2(9)