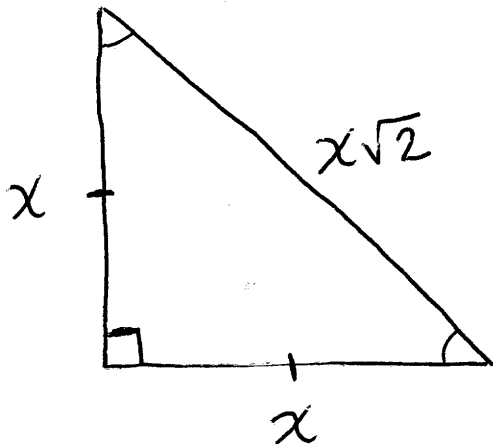


45-45-90 Triangle

- special triangle
in which there is a
relationship between
the legs and hypotenuse

- isosceles triangle
 - legs are congruent

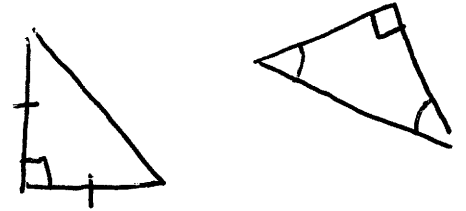


ways to tell you have
45-45-90

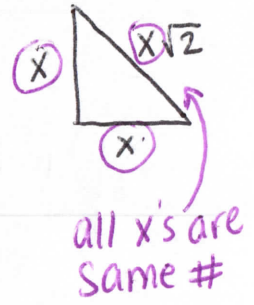
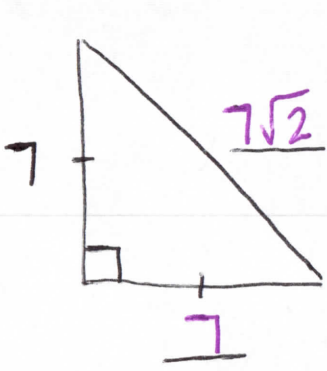


Special Right Triangles

45-45-90!



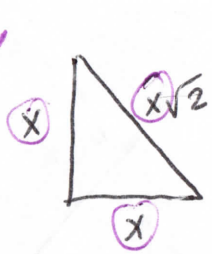
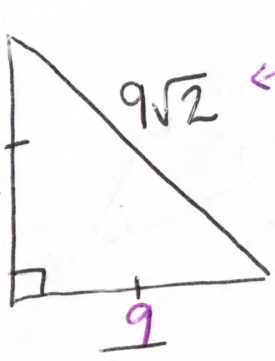
When Given leg as #



- * other leg is same
- * multiply leg by $\sqrt{2}$ for hypotenuse

1A

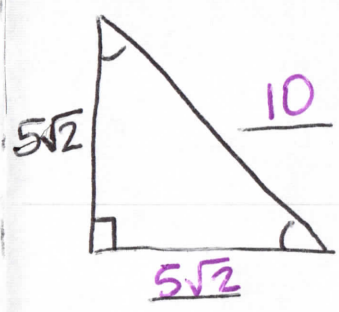
When given hypotenuse w/ radical 2



- * take # in front of $\sqrt{2}$ for legs

2A

When Given leg w/ $\sqrt{2}$



$$5\sqrt{2} \cdot \sqrt{2}$$

$$5\sqrt{4}$$

$$5(2)$$

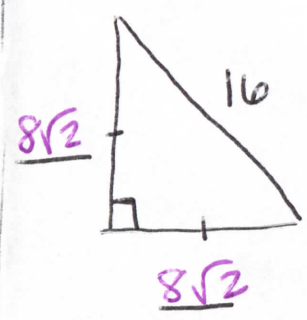
$$10$$

$\sqrt{4}=2$

- * other leg is the same
- * multiply leg by $\sqrt{2}$ for hypotenuse, by simpl. for $\sqrt{4}$ to 2 and multiply!!

1B

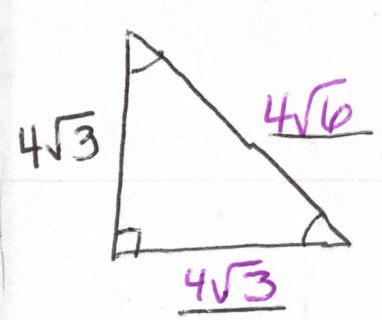
When Given hypotenuse as a whole #



$$\frac{16}{2} = 8 \cdot \sqrt{2} = 8\sqrt{2}$$

- * HYP Rule * When given the hyp - divide by 2 and mult. by $\sqrt{2}$ for legs

When Given leg w/ radical not $\sqrt{2}$.



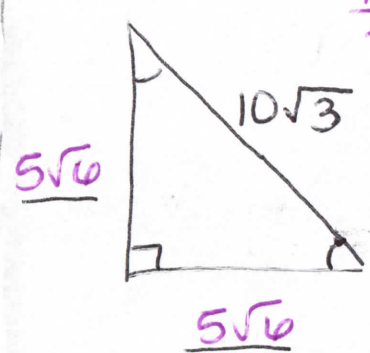
$$4\sqrt{3} \cdot \sqrt{2}$$

$$4\sqrt{6}$$

- * other leg is the same.
- * multiply leg by $\sqrt{2}$ for hypotenuse

1C (inside w/ inside) for mult radicals (outside w/ outside)

When given hyp w/ radical, not $\sqrt{2}$



$$\frac{10\sqrt{3}}{2} = 5\sqrt{3}$$

$$5\sqrt{3} \cdot \sqrt{2} = 5\sqrt{6}$$

- Use the HYP Rule, but remember, inside w/ inside and outside w/ outside! to find legs.