

1. Let  $x, x+2$  be the #'s

$$\sqrt{x(x+2)} = 4\sqrt{5}$$

$$x^2 + 2x = 80$$

$$x^2 + 2x - 80 = 0$$

$$(x+10)(x-8) = 0$$

$$x = 8$$

The two #'s are 8, 10

2.

a)  $\frac{8+x}{2} = 12$

$$x = 16$$

b)  $\sqrt{8x} = 12$

$$8x = 144$$

$$x = 18$$

c)  $\frac{2(x)(8)}{x+8} = 12$

$$16x = 12x + 96$$

$$4x = 96$$

$$x = 24$$

3. a) 4 bis thm!

$$\frac{10}{5} = \frac{6}{x}$$

$$x = 3$$

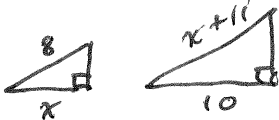
b) 3 ||'s thm!

$$\frac{2}{5} = \frac{x}{8}$$

$$x = \frac{16}{5}$$

c) ~Δ's!

(Make sure you line them up correctly)



$$\frac{8}{x} = \frac{x+11}{10}$$

$$x^2 + 11x - 80 = 0$$

$$(x+16)(x-5) = 0$$

$$x = 5$$

d) ~Δ's

$$\frac{6}{2x-7} = \frac{6+x}{2x+3}$$

$$12x + 18 = 2x^2 + 5x - 42$$

$$2x^2 - 7x - 60 = 0$$

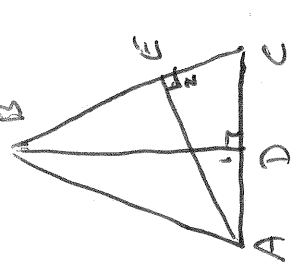
$$(2x-15)(x+4) = 0$$

$$x = 7.5$$

4. Use geom. mean since exponential

$$\sqrt{(800)(1568)}$$

$$= 1120$$



5.  $\overline{AB} \cong \overline{BC}$   
 $\overline{AE} \perp \overline{BC}$   
 $\overline{AC} \perp \overline{BD}$

$\overline{AB} \cong \overline{BC}$   
 $\angle BAC \cong \angle C$   
 $\overline{AE} \perp \overline{BC}$   
 $\overline{AC} \perp \overline{BD}$   
 $\angle 1, \angle 2$  b's  
 $\angle 1 \cong \angle 2$   
 $\triangle ABD \sim \triangle ACE$   
 $\frac{AB}{BD} = \frac{AC}{AE}$   
 $AC \cdot BD = AB \cdot AE$  cross multiply