

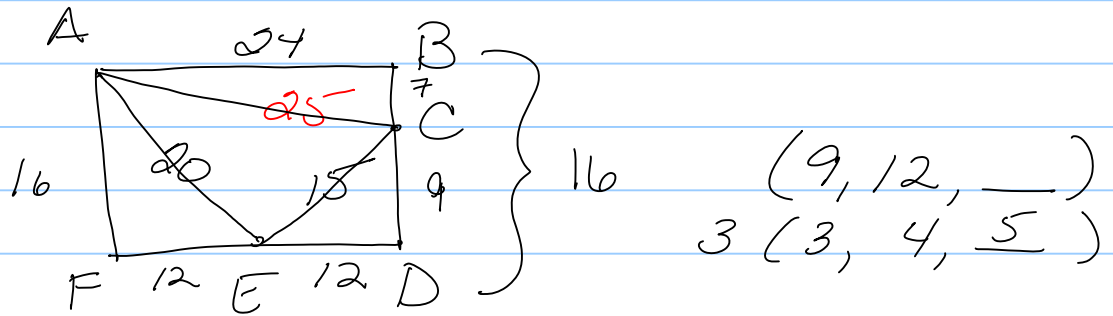
Q & A

Note Title

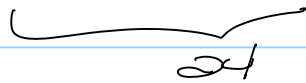
2/11/2016

8th

9.4.15



(12, 16, AE)
4(3, 4, 5)



(7, 24, 25)

$$49 + 576 =$$

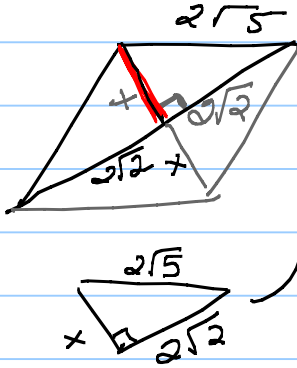
$$625 = s^2$$

$$25 = s$$

$$P_{\Delta ACE} = 25 + 20 + 15$$

$$= 60$$

18. $P_{RHOM} = 8\sqrt{5} \Rightarrow S_{RHOM} = 2\sqrt{5}$



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

$$x^2 + (4 \cdot 2) = (4 \cdot 5)$$

$$x^2 + 8 = 20$$

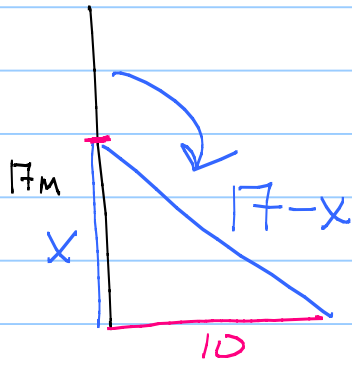
$$x^2 = 12$$

$$x = \sqrt{4} \cdot \sqrt{3}$$

$$x = 2\sqrt{3}$$

$2x = \text{length of other diag or } 4\sqrt{3}$

19. WW



$$x^2 + 10^2 = (17-x)^2$$

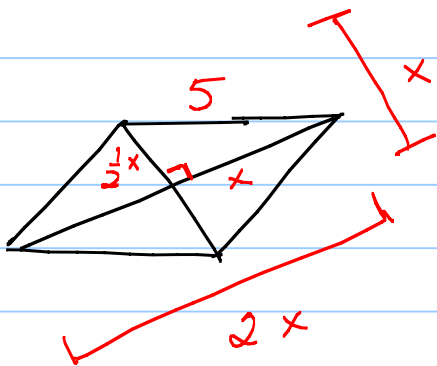
$$x^2 + 100 = 289 - 34x + x^2$$

$$+34x - x^2 - 100 - 100 + 34x - x^2$$

$$34x = 189$$

$$x = \frac{189}{34} \text{ m}$$

21.



$$P=20 \therefore S = \frac{20}{4} = 5$$

$$\left(\frac{x}{2}\right)^2 + x^2 = 5^2$$

$$\frac{x^2}{4} + \frac{4x^2}{4} = 25$$

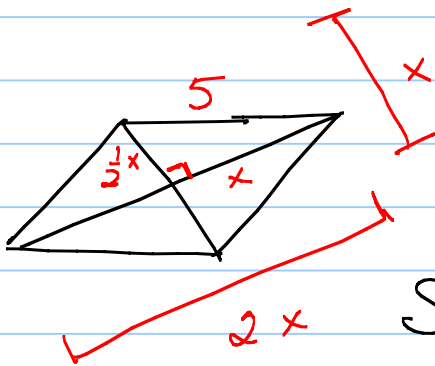
$$\frac{5x^2}{4} = 25$$

$$5x^2 = 100$$

$$x^2 = 20$$

$$x = \sqrt{4 \cdot 5}$$

$$x = 2\sqrt{5}$$

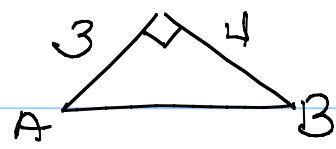
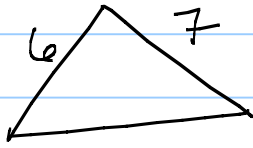


Sum of diags is $x + 2x$ or $3x$

$$\& x = 2\sqrt{5} \therefore$$

$$\text{Sum of diags} = 3(2\sqrt{5}) = 6\sqrt{5}$$

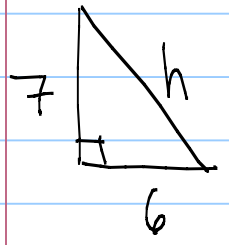
22



If rt Δ then $3^2 + 4^2 = 5^2$

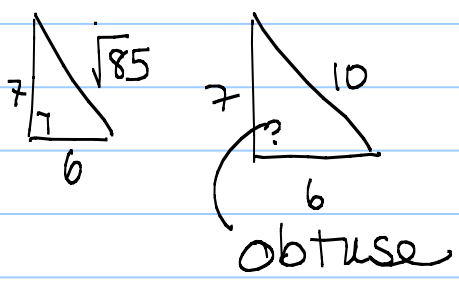
FROM CH 1:

DIFF < (3rd side) < SUM
 $1 < AB < 7$

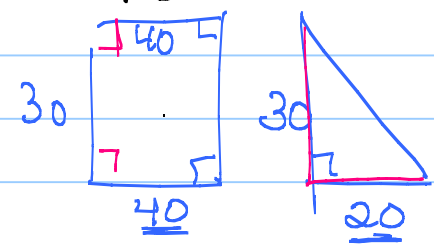
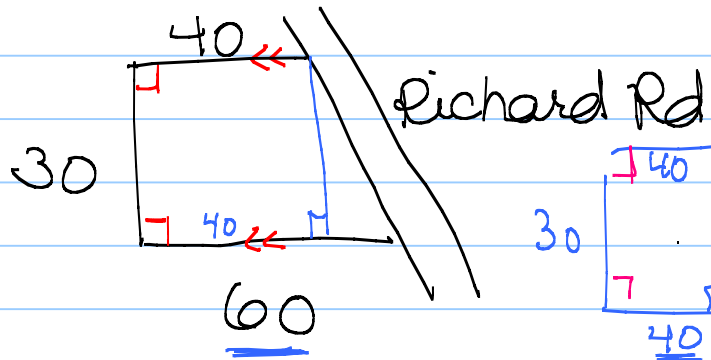


$6^2 + 7^2 = h^2$
 $36 + 49 = h^2$
 $85 = h^2$
 $\sqrt{85} < 10$

If $AB = 5$ then rt
 If $1 < AB < 5$, then acute
 If $5 < AB < 7$, then obtuse

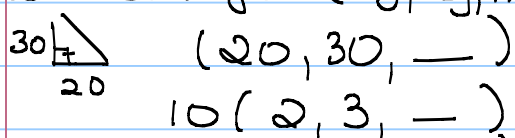


23.



$b \cdot h + \frac{1}{2} b \cdot h$
 $1200 + \frac{1}{2} 20 \cdot 30$

Rd frontage: (leg, leg, hyp)

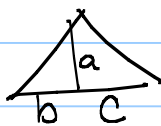


$10(2, 3, -)$
 $10(2^2 + 3^2 = h^2) \Rightarrow 10 \sqrt{13} \approx 10(3.6) \approx 36m$

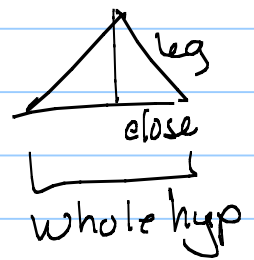
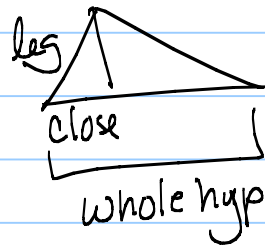
$1200 + 300 = 1500 m^2$

9.3: Alt-Hyp \star alt² = part · part

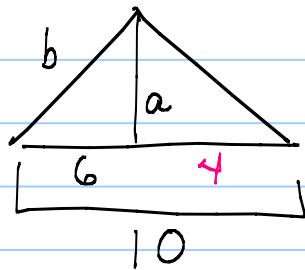
or $a^2 = b \cdot c$



\star leg² = (close)(whole hyp)



Ex.



$$a^2 = 6 \cdot 4$$

$$a = 2\sqrt{6}$$

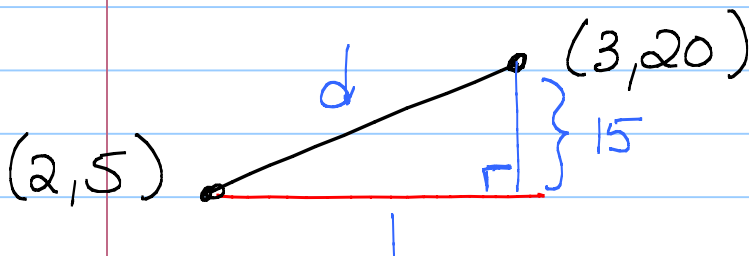
$$b^2 = 6 \cdot 2.5$$

$$b^2 = \sqrt{3 \cdot 2 \cdot 2.5}$$

$$b = 2\sqrt{15}$$

9.4 Pyth Thm : rt $\Delta \iff a^2 + b^2 = c^2$

9.5 Dist \Rightarrow (Pyth Thm) or $D = \sqrt{\Delta x^2 + \Delta y^2}$



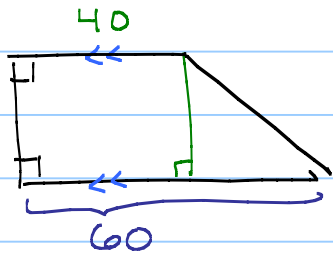
$$1^2 + 15^2 = d^2$$

$$1 + 225 = d^2$$

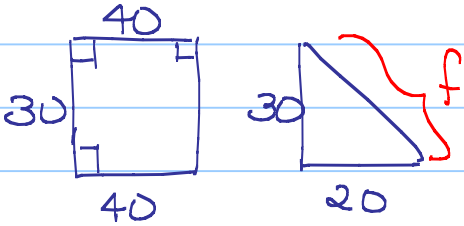
$$226 = d^2$$

7th:
9.4
93: 30

trap



Rect + RTΔ



$b \cdot h + \frac{1}{2} b_2 \cdot h$

$$1200 + 300 = \boxed{1500 \text{ m}^2}$$

b) (leg, leg, hyp)

(20, 30, f)

10 (2, 3, —)

$$2^2 + 3^2 = h^2$$

$$4 + 9 = h^2$$

$$\sqrt{13} = h$$

$$\begin{aligned} \therefore f &= \boxed{10\sqrt{13}} \\ &\approx \boxed{10(3.605)} \\ &\approx \boxed{36 \text{ m}} \end{aligned}$$

* Like 22

Classify Δs by ∠.

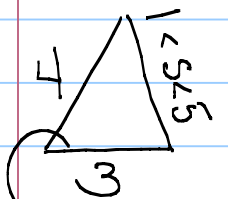
(3, 4, —)

$$3^2 + 4^2 = 5^2$$

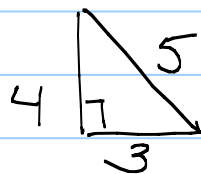
$$9 + 16 = 25$$

from ch 1:

diff < (3rd side Δ) < sum



acute



right

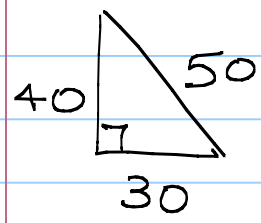


obtuse

Classify \triangle :

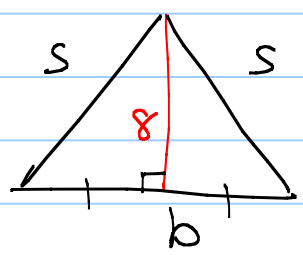
30, 40, 47

$47 < 50 \therefore \triangle$ ACUTE



10(3 4 5)

9.4.26

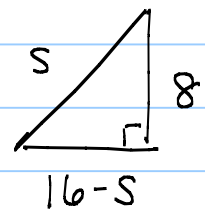


$$2s + b = 32$$

$$b = 32 - 2s$$

$$b = 2(16 - s)$$

$$\frac{1}{2} b = 16 - s$$



$$\rightarrow 8^2 + (16 - s)^2 = s^2$$

$$64 + 256 - 32s + s^2 = s^2$$

$$+32s - s^2 - s^2 + 32s$$

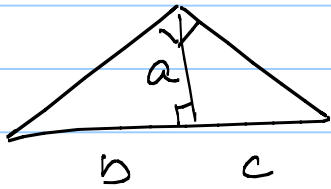
$$320 = 32s$$

$$\frac{320}{32} = s$$

$$10 = s$$

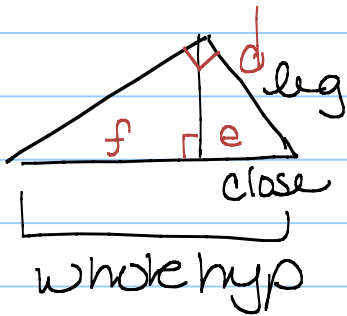
$$\begin{array}{r} 256 \\ 64 \\ \hline 320 \end{array}$$

9.3: Alt-Hyp

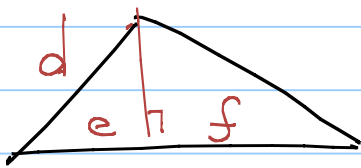


$$\text{alt}^2 = \text{part} \cdot \text{part}$$

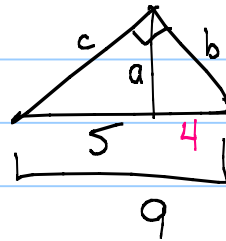
$$a^2 = b \cdot c$$



$$\text{leg}^2 = (\text{close})(\text{whole hyp})$$



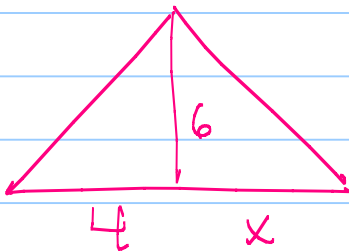
Given



$$a^2 = 5 \cdot 4 \quad b^2 = 4 \cdot 9 \quad c^2 = 5 \cdot 9$$

$$a = 2\sqrt{5} \quad b = 6 \quad c = 3\sqrt{5}$$

9.3:

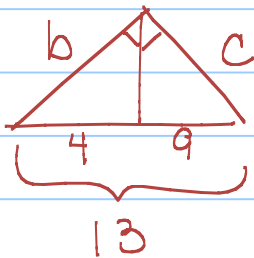


$$\text{alt}^2 = \text{part} \cdot \text{part}$$

$$6^2 = 4 \cdot x$$

$$\frac{36}{4} = x$$

$$9 = x$$



$$b^2 = 4(13)$$

$$b = 2\sqrt{13}$$

$$\text{leg}^2 = \text{close}(\text{hyp})$$

$$c^2 = 9(13)$$

$$c = 3\sqrt{13}$$

9.4: Pyth Thm

$$\text{rt } \Delta \Leftrightarrow a^2 + b^2 = c^2$$
$$\text{leg}^2 + \text{leg}^2 = \text{hyp}^2$$

9.5: Dist \rightarrow Pyth Thm $\rightarrow \sqrt{\Delta x^2 + \Delta y^2}$

