

8-2, 8-3 HW (odds, work for more challenging evens)

① $x=5$

③ $x=8$

⑤ $x=10\sqrt{3}$

⑦ $x=8$

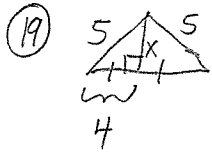
⑨ $x=25$

⑪ $x=8\sqrt{2}$

⑬ 3

⑮ $4\sqrt{2}$

⑰ 68

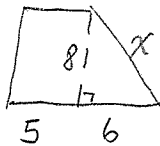


$x=3$

⑲ $3\sqrt{5}$

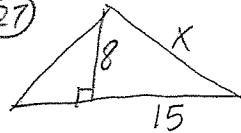
⑳ $x=12$

⑳



$x=10$

㉑



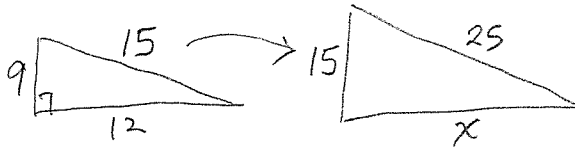
$x=17$

㉒

$$\frac{3}{4} = \frac{x}{5-x}$$

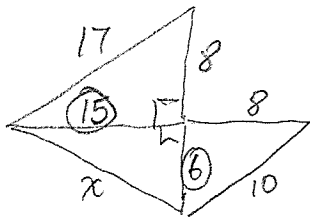
$$x = \frac{15}{7} = 2\frac{1}{7}$$

㉓



$x=20$

* ㉔



$$15^2 + 6^2 = x^2$$

$$225 + 36 = x^2$$

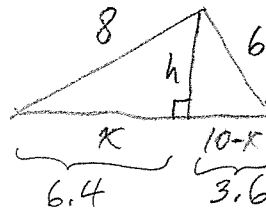
$$\sqrt{261} = x$$

$$3\sqrt{29} = x$$

* ㉕ length of median is $\frac{1}{2}$ the length of hypotenuse

a) median = 5

b)



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

$$x = 6.4$$

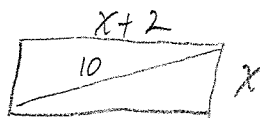
$$\frac{6.4}{h} = \frac{h}{3.6}$$

$$h^2 = 23.04$$

$$h = 4.8$$

8.2, 8.3 HW

32



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

$$x^2 + x^2 + 4x + 4 = 100$$

$$2x^2 + 4x - 96 = 0$$

$$x^2 + 2x - 48 = 0$$

$$(x+8)(x-6) = 0$$

$$x = -8 \quad x - 6 = 0$$

OMIT $x = 6$

$$W = 6$$

$$L = 8$$

$$2(6+8) = P$$

$28 = P$

33 $d = 13$

34 $d = 3\sqrt{6}$

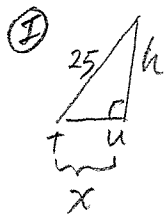
35 $d = e\sqrt{3}$

36 $d = \sqrt{l^2 + w^2 + h^2}$

37 $h = 12$

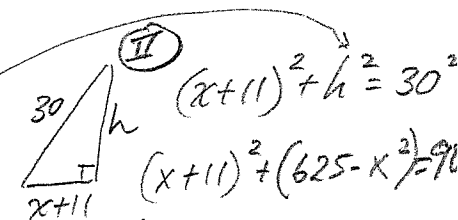
$$\frac{x}{h} = \frac{h}{21-x}$$

38 $h = 24$



$$x^2 + h^2 = 25^2$$

$$h^2 = 625 - x^2$$



$$(x+11)^2 + h^2 = 30^2$$

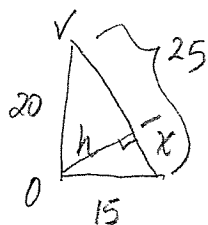
$$(x+11)^2 + (625 - x^2) = 900$$

$$x^2 + 22x + 121 + 625 - x^2 = 900$$

$$22x = 154$$

$$x = 7$$

39 $OE = 12$



$$\text{I} \quad \frac{25}{15} = \frac{15}{x}$$

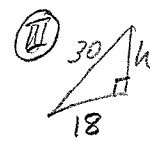
$$x = 9$$

II Let $h = OE$

$$\frac{16}{h} = \frac{h}{9}$$

$$h^2 = 144$$

$$h = 12$$



$$\text{III} \quad 18^2 + h^2 = 30^2$$

$$h^2 = 576$$

$$h = 24$$

① acute

③ right

⑤ obtuse

⑦ ^{a)} right

^{b)} right

⑨ Let $x = ST$

$$12^2 + x^2 = 13^2$$

$$x^2 = 169 - 144$$

$$x^2 = 25$$

$$x = 5$$

$\triangle RST$

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

$$9 + 16 = 25$$

By the converse
of Pyth. Thm,

$\triangle RST$ is right \triangle .

⑪ acute

⑬ obtuse

⑮ $x^2 + (x+4)^2 > 20^2$

$$x^2 + x^2 + 8x + 16 > 400$$

$$2x^2 + 8x - 384 > 0$$

$$x^2 + 4x - 192 > 0$$

$$(x+16)(x-12) > 0$$

$$x+16 > 0 \quad | \quad x-12 > 0$$

$$x > -16 \quad | \quad x > 12$$

CK

$$x^2 + 16^2 > 20^2$$

$$400 > 400$$

$$16^2 + 20^2 > 20^2$$

$$656 > 400$$

8-2, 8-3 evens (Hw/Key)

② 13

④ $2\sqrt{10}$

⑥ $4\sqrt{5}$

⑧ 6

⑩ 9

⑫ 6

⑭ 1

⑯ $6\sqrt{2}$

⑱ 16 cm

⑳ 8

㉒ $4\sqrt{7}$

㉔ 28

㉖ $8\sqrt{2}$

㉘ $2\frac{1}{7}$

㉚ $3\sqrt{29}$

㉜ 28 cm

㉞ $3\sqrt{6}$

㉟ 36

㉟ 24

② obtuse

④ right

⑥ right

⑧^{a)} right
b) right

⑩ step 1: $(BC)^2 = 36$

2: $(BC)^2 + (CD)^2 ? (DB)^2$

$36 + 49 < 121 \leftarrow$

⑫ obtuse

⑭ right

⑯ rhombus

