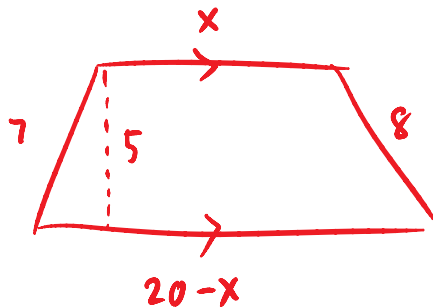


Sec 11.3
pgs. 526 - 527
#12 - 16, 17b

Sec 11.4
pgs. 529 - 530
#2, 4 - 10

11.3

- #12 The perimeter of a trapezoid is 35. The non-parallel sides are 7 and 8. Find the trapezoid's area if its height is 5.

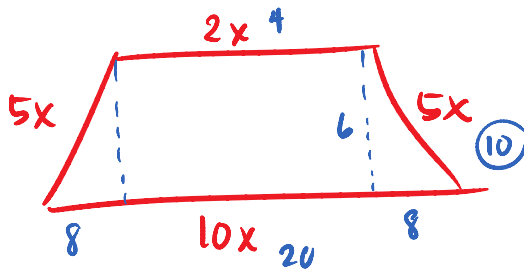


$$A = \frac{x + 20}{2} \cdot 5$$

$$= 10 \cdot 5$$

$$= \boxed{50}$$

- #13 The consecutive sides of an isosceles trapezoid are in the ratio of 2:5:10:5, and the trapezoid's perimeter is 44. Find the area of the trapezoid.



$$2x + 5x + 5x + 10x = 44$$

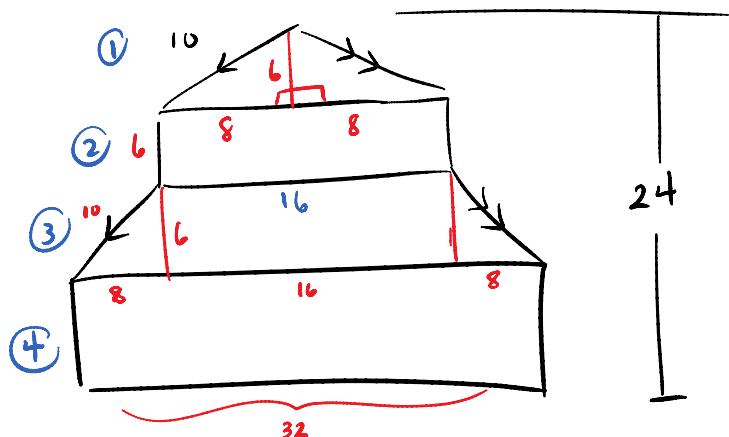
$$22x = 44$$

$$x = 2$$

$$A = \frac{20 + 4}{2} \cdot 6$$

$$\boxed{A = 72}$$

#14



$$A_1 = \frac{16(6)}{2} = 48$$

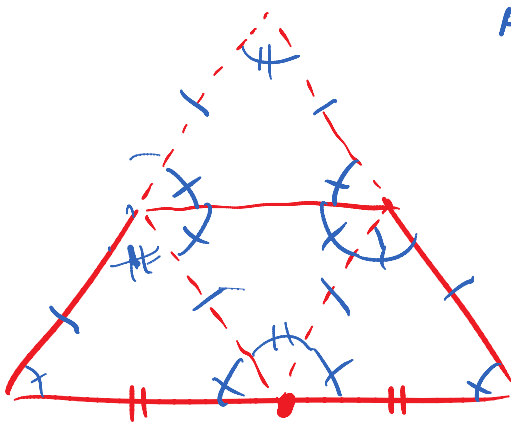
$$A_2 = 16(6) = 96$$

$$A_3 = \frac{32 + 16}{2} \cdot 6 = 144$$

$$A_4 = 4(32) = 128$$

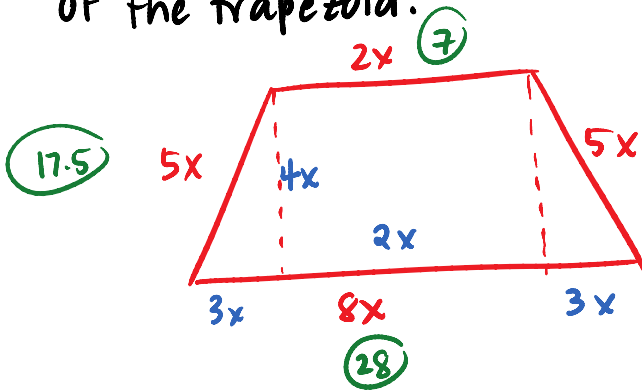
$$\boxed{A_{\text{total}} = 480}$$

- #15 When an isosceles triangle is folded so that its vertex is on the midpt of the base, a trapezoid with area $12u^2$ is formed. Find the area of the original triangle



$$A_{\text{trap}} = 12$$

- #16 The sides of a trapezoid are in a ratio of 2:5:8:5. The trapezoid's area is 245. Find the height and perimeter of the trapezoid.



$$245 = \frac{2x + 8x}{2} \cdot 4x$$

$$490 = (10x)4x$$

$$490 = 40x^2$$

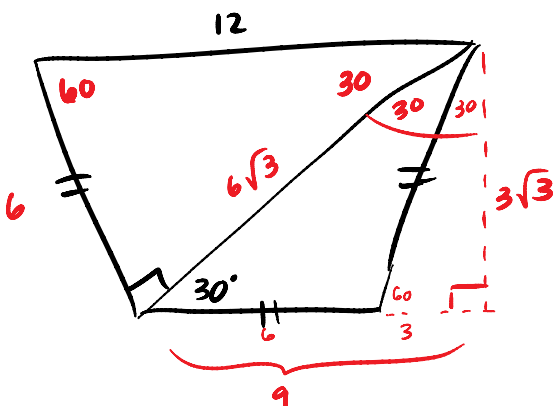
$$\sqrt{12.25} = \sqrt{x^2}$$

$$3.5 = x$$

$$h = 4(3.5) = 14$$

$$P = 70$$

#17b



$$2x = 6\sqrt{3}$$

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

$$A = \frac{12+6}{2} \cdot 3\sqrt{3}$$

$$= 9 \cdot 3\sqrt{3}$$

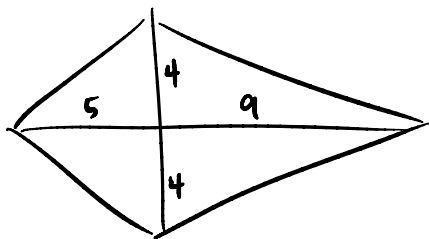
$$= 27\sqrt{3}$$

drop alt. inside or out...

11.4

#2 Find the area of each kite

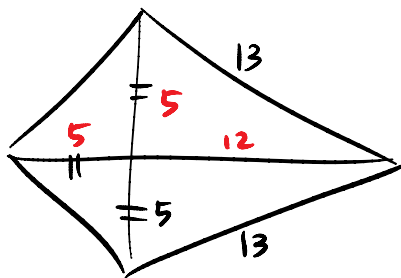
a.



$$A = \frac{14 \cdot 8}{2}$$

$$A = 56$$

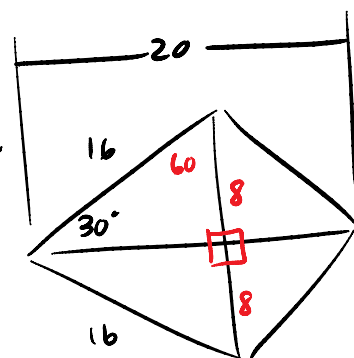
b.



$$A = \frac{10 \cdot 17}{2}$$

$$A = 85$$

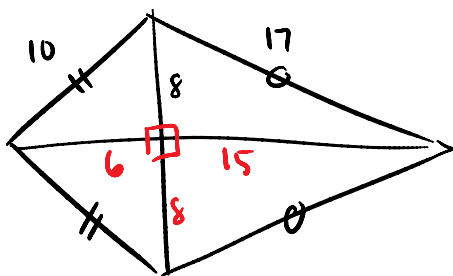
c.



$$A = \frac{16 \cdot 20}{2}$$

$$A = 160$$

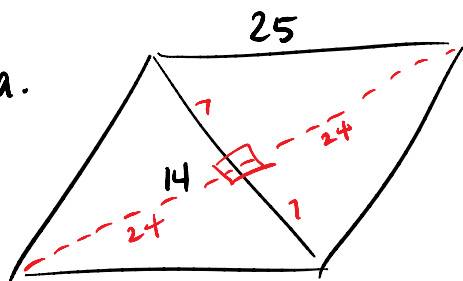
#4 Find Area



$$A = \frac{16 \cdot 21}{2}$$

$$A = 168$$

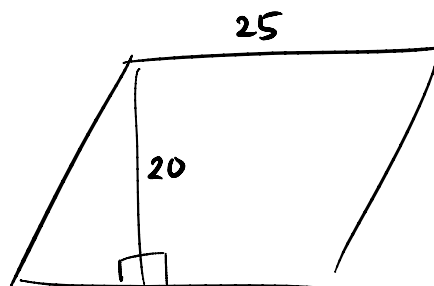
#5 a.



$$A = \frac{14 \cdot 48}{2}$$

$$A = 336$$

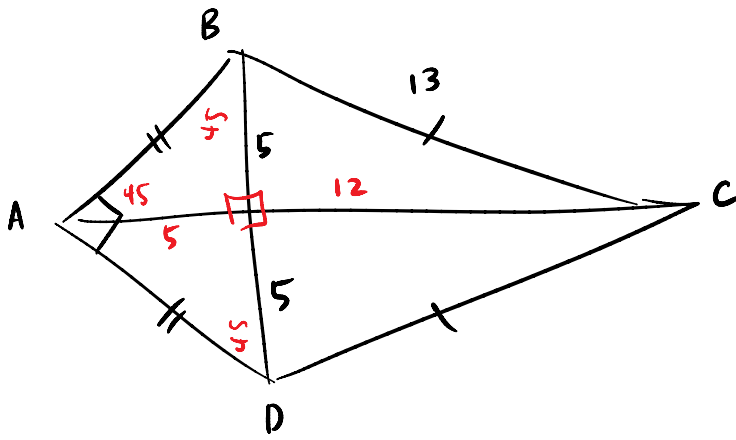
b.



$$A = 25(20)$$

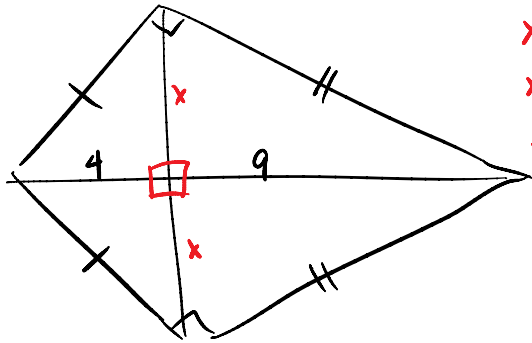
$$A = 500$$

#6



$$A = \frac{10 \cdot 17}{2} = \boxed{85}$$

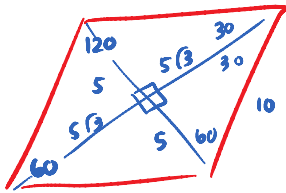
#7



$$\begin{aligned} x^2 &= 4 \cdot 9 \\ x^2 &= 36 \\ x &= 6 \end{aligned}$$

$$A = \frac{12(13)}{2} = \boxed{78}$$

#8 Find the area of a rhombus w/ a perimeter of 40 and one angle of 60°



$$A = \frac{10(10\sqrt{3})}{2} = \boxed{50\sqrt{3}}$$

#9 Find the area of region I, region II, region III

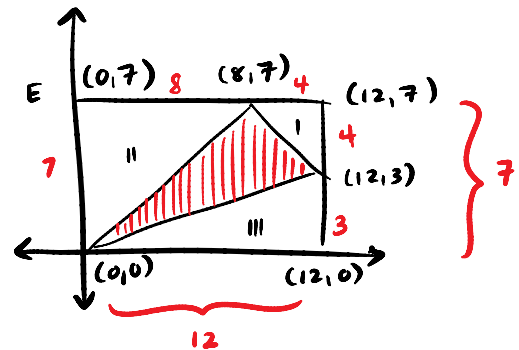
a. $A_I = \frac{4 \cdot 4}{2} = \boxed{8}$

b. $A_{II} = \frac{8 \cdot 7}{2} = \boxed{28}$

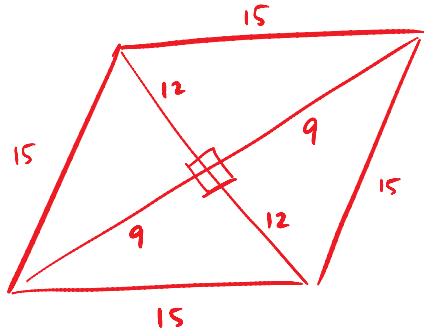
c. $A_{III} = \frac{12 \cdot 3}{2} = \boxed{18}$

d. $A_{\text{rect}} = 84$

$$A_{\Delta OBD} = 84 - 8 - 28 - 18 = \boxed{30}$$



#10 Given a rhombus with diagonals 18 and 24, find the height



$$A = \frac{24 \cdot 18}{2}$$

$$A = 216$$

$$A = bh$$

$$216 = 15 \cdot h$$

$$\boxed{\frac{72}{5} = h}$$