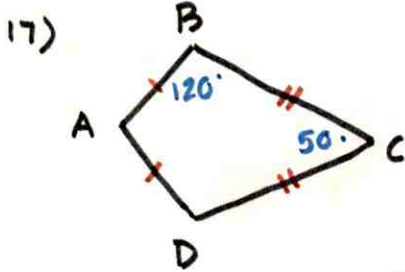


8.5 Kites

2) Describe differences in a kite and trapezoid.

Trapezoid: one pair of opp. sides \parallel Kite: 2 pairs of consecutive sides are \cong



opp. angles of a kite are \cong ,
so the $m\angle A = 50^\circ$.

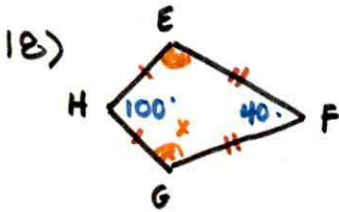
$$\angle B \cong \angle D \therefore m\angle D = 120^\circ$$

$$m\angle A = 360 - (2(120) + 50)$$

$$m\angle A = 360 - (240 + 50) \\ = 360 - 290$$

$$m\angle A = 70^\circ$$

Kite EFGH. Find $m\angle G$.

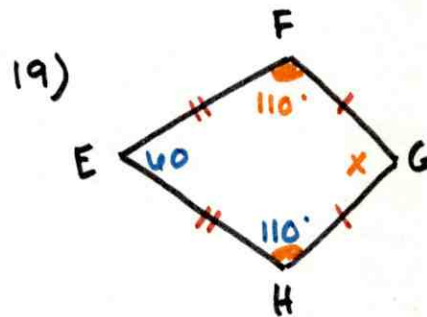


$$2x + 100 + 40 = 360$$

$$2x + 140 = 360$$

$$2x = 220$$

$$m\angle G = 110^\circ$$

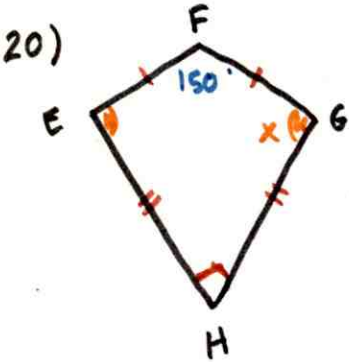


$$x + 2(110) + 60 = 360$$

$$x + 220 + 60 = 360$$

$$x + 280 = 360$$

$$m\angle G = 80^\circ$$



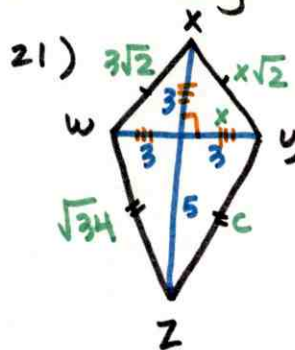
$$2x + 150 + 90 = 360$$

$$2x + 240 = 360$$

$$2x = 120$$

$$m\angle G = 60^\circ$$

Find the lengths in the kite.

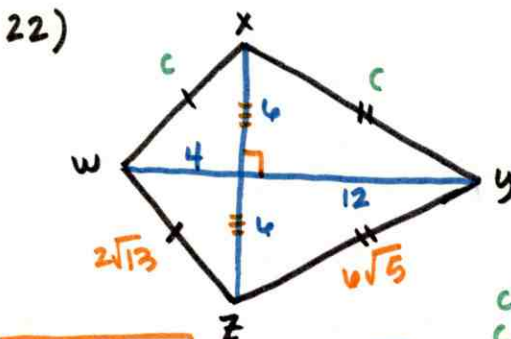


$$x = 3 \\ x\sqrt{2} = 3\sqrt{2}$$

$$WX = 3\sqrt{2} \\ XY = 3\sqrt{2}$$

$$c^2 = 3^2 + 5^2 \\ c^2 = 9 + 25 \\ \sqrt{c^2} = \sqrt{34} \\ 2^{\wedge} 17$$

$$WZ = \sqrt{34} \\ ZY = \sqrt{34}$$



$$c^2 = 4^2 + 6^2$$

$$c^2 = 16 + 36$$

$$\sqrt{c^2} = \sqrt{52}$$

$$c^2 = 6^2 + 12^2$$

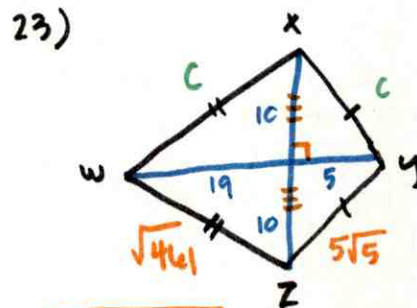
$$c^2 = 36 + 144$$

$$\sqrt{c^2} = \sqrt{180}$$

$$2^{\wedge} 90 \\ 2^{\wedge} 45 \\ 3^{\wedge} 15 \\ 3^{\wedge} 5$$

$$WX = 2\sqrt{13} \\ WZ = 2\sqrt{13}$$

$$YZ = 6\sqrt{5} \\ XY = 6\sqrt{5}$$



$$c^2 = 5^2 + 10^2$$

$$c^2 = 25 + 100$$

$$\sqrt{c^2} = \sqrt{125}$$

$$5^{\wedge} 25 \\ 5^{\wedge} 5$$

$$c^2 = 10^2 + 19^2$$

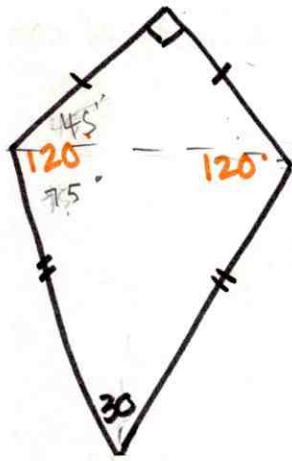
$$c^2 = 100 + 361$$

$$\sqrt{c^2} = \sqrt{461}$$

$$XY = 5\sqrt{5} \\ YZ = 5\sqrt{5}$$

$$WZ = \sqrt{461} \\ ZY = \sqrt{461}$$

35) The measure of one angle is 90: The measure of another is 30.



$$\frac{360 - (90 + 30)}{2} = \text{angle}$$

