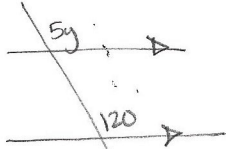
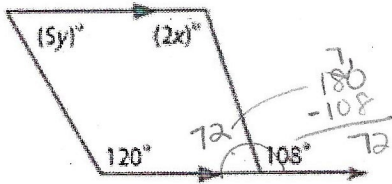


# Honors

Find the value of the variable. Explain your reasoning.

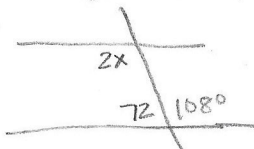
together

1)



$$5y = 120$$

$$y = 24$$

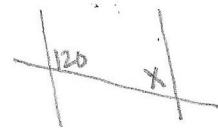
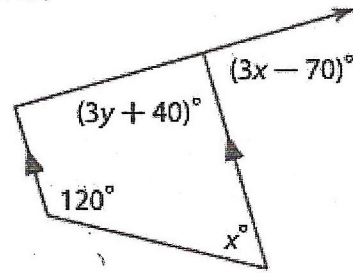


$$2x = 108$$

$$x = 54$$

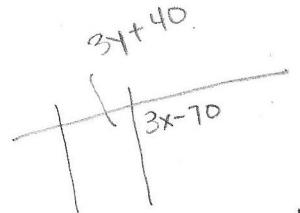
together

2)



$$120 + x = 180$$

$$x = 60$$



$$3y + 40 + 3x - 70 = 180$$

$$3y + 3(60) - 30 = 180$$

$$3y + 180 - 30 = 180$$

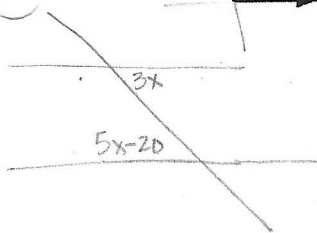
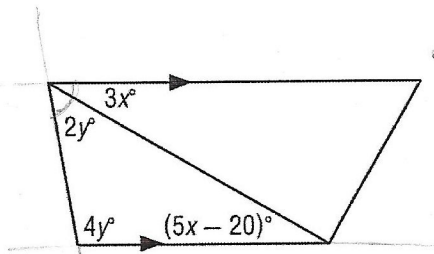
$$3y + 150 = 180$$

$$3y = 30$$

$$y = 10$$

repeat

4)

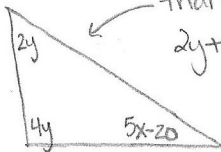


$$3x = 5x - 20$$

$$20 = 2x$$

$$10 = x$$

triangle



$$2y + 4y + 5x - 20 = 180$$

$$2y + 4y + 5(10) - 20 = 180$$

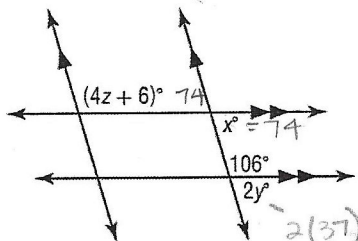
$$6y + 50 - 20 = 180$$

$$6y + 30 = 180$$

$$6y = 150$$

$$y = 25$$

5)



$$x + 106 = 180$$

$$x = 74$$

$$74 = 2y$$

$$37 = y$$

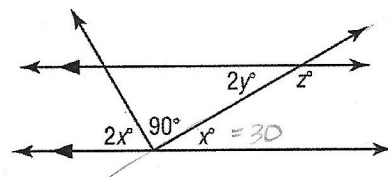
$$74 + 4z + 6 = 180$$

$$80 + 4z = 180$$

$$4z = 100$$

$$z = 25$$

6)



$$2x + x + 90 = 180$$

$$3x = 90$$

$$x = 30$$

$$2y = 30$$

$$y = 15$$

$$30 + z = 180$$

$$z = 150$$