

Name:

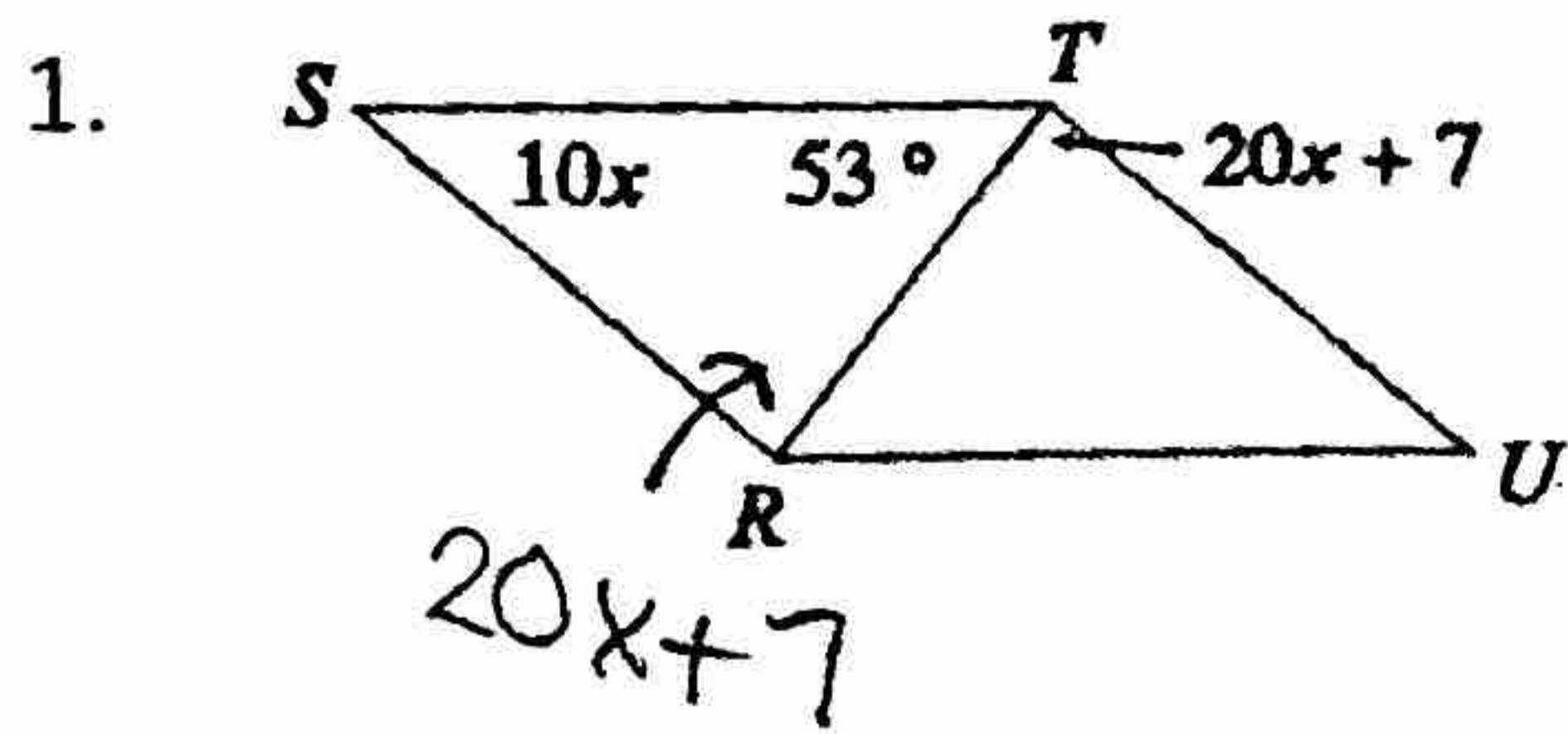
Key

Date:

Hour:

Advanced Geometry  
WS PC #2 Review (7.1 - 7.3)

Find x.

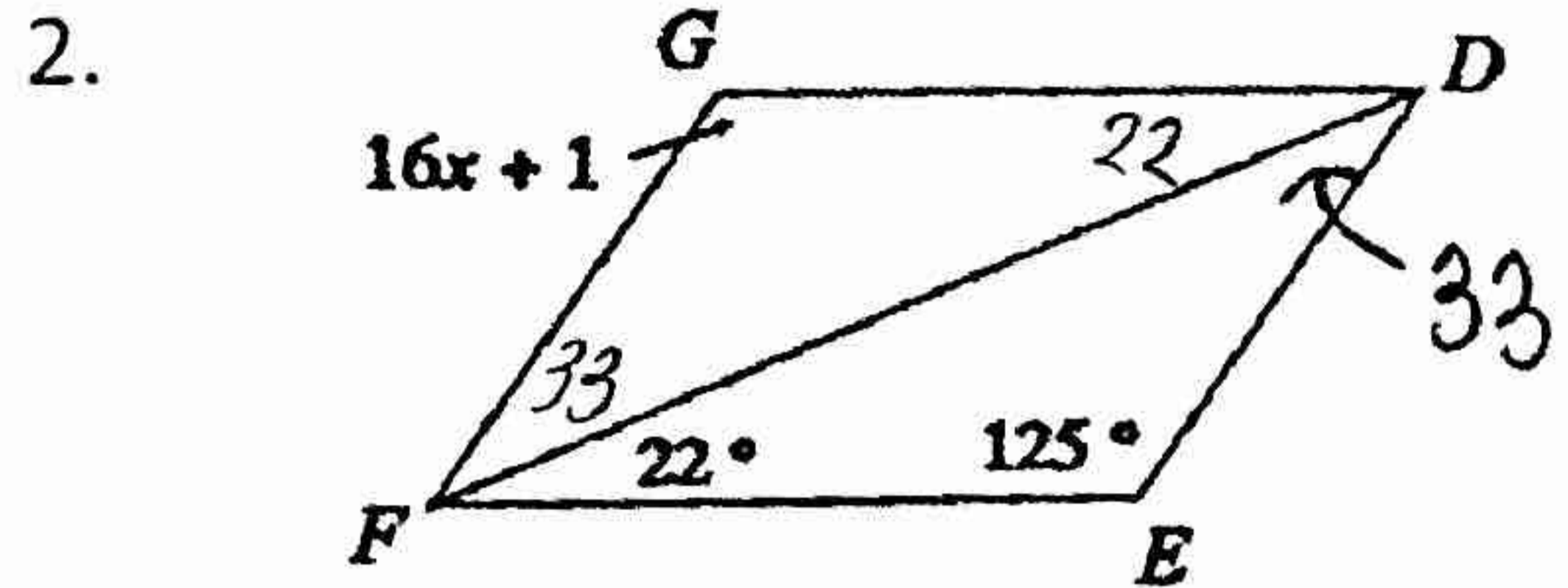


$$10x + 20x + 7 + 53 = 180$$

$$30x + 60 = 180$$

$$30x = 120$$

$$x = 4$$



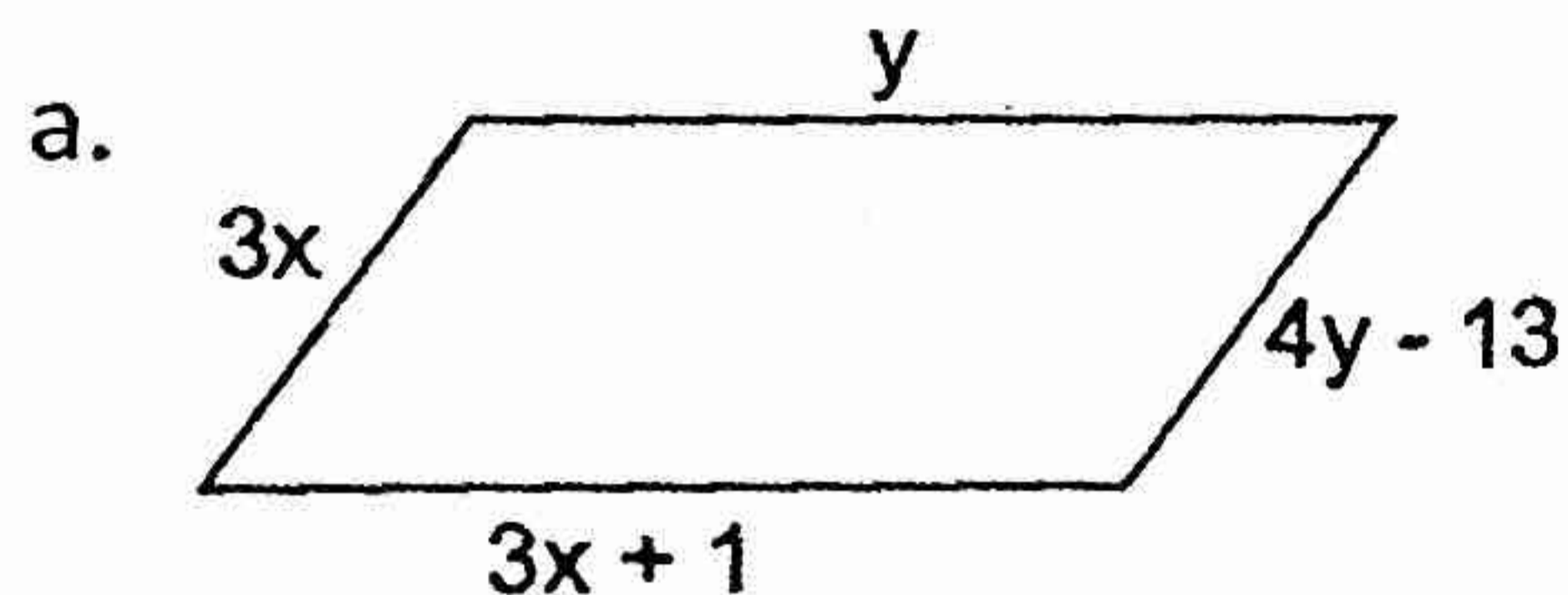
$$33 + 22 + 16x + 1 = 180$$

$$16x + 56 = 180$$

$$16x = 124$$

$$x = 7.75$$

3. Given the quadrilaterals below, what value of y would allow you to conclude that the figure is a parallelogram?



$$3x = 4y - 13$$

$$y = 3x + 1$$

$$4 = 3x + 1$$

$$-1 \quad -1$$

$$3 = 3x$$

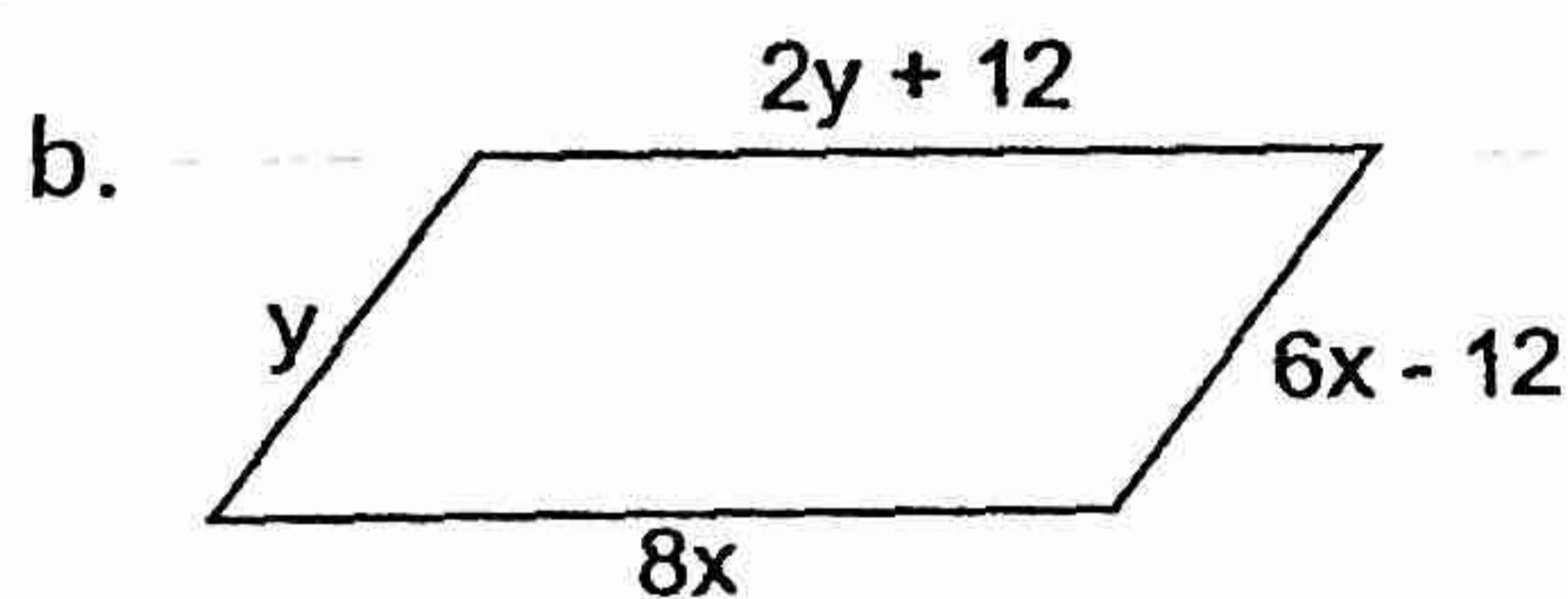
$$x = 1$$

$$3x - 4y = -13$$

$$+ \quad -3x + y = 1$$

$$\hline -3y = -12$$

$$y = 4$$



$$y = 6x - 12$$

$$8x = 2y + 12$$

$$y = 6(3) - 12$$

$$y = 6$$

$$8x = 2(6x - 12) + 12$$

$$8x = 12x - 24 + 12$$

$$8x = 12x - 12$$

$$-4x = -12$$

$$x = 3$$

4. Find the measure of each angle of a regular octagon.

$$\frac{(n-2)180}{8} = \frac{1080}{8} = 135^\circ$$

5. Find the sum of the interior angles of a convex pentagon.

$$(n-2)180$$

$$(5-2)180 = 540^\circ$$



6. Given parallelogram ABCD, find BE.

$$y = x + 4$$

$$7x = 4(y) - 4$$

$$7x = 4(x + 4) - 4$$

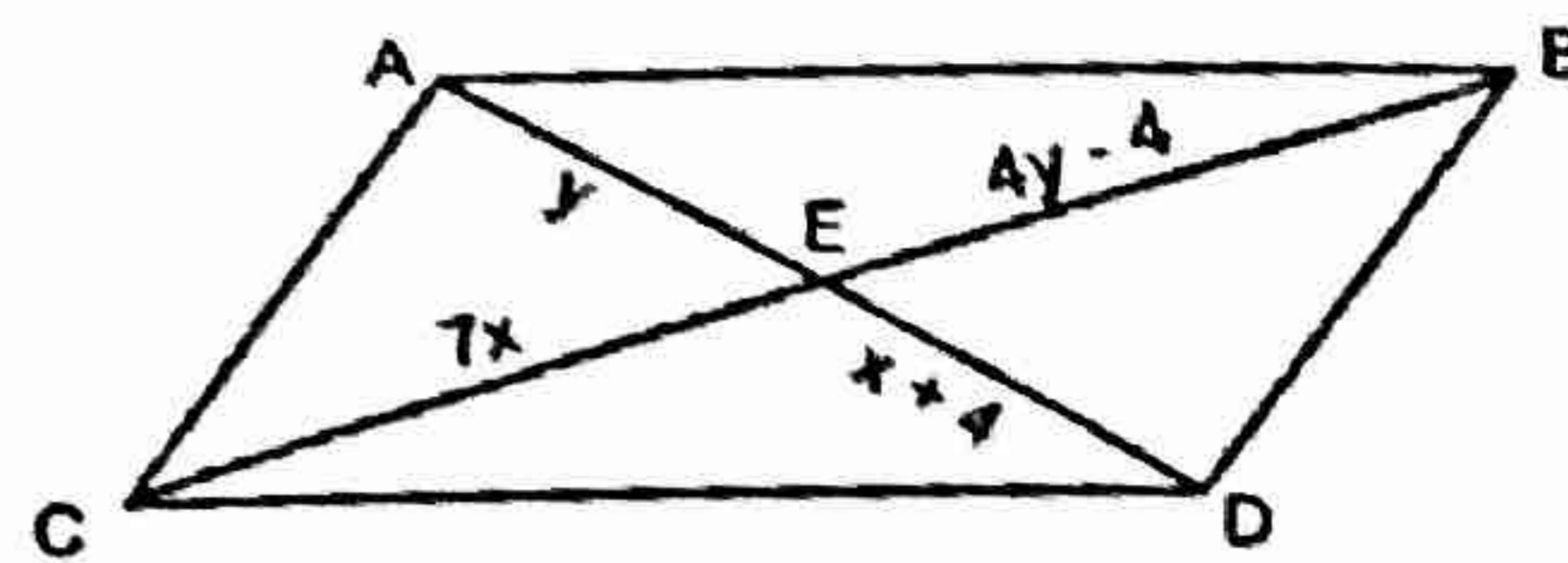
$$7x = 4x + 16 - 4$$

$$3x = 12$$

$$x = 4$$

$$y = 4 + 4$$

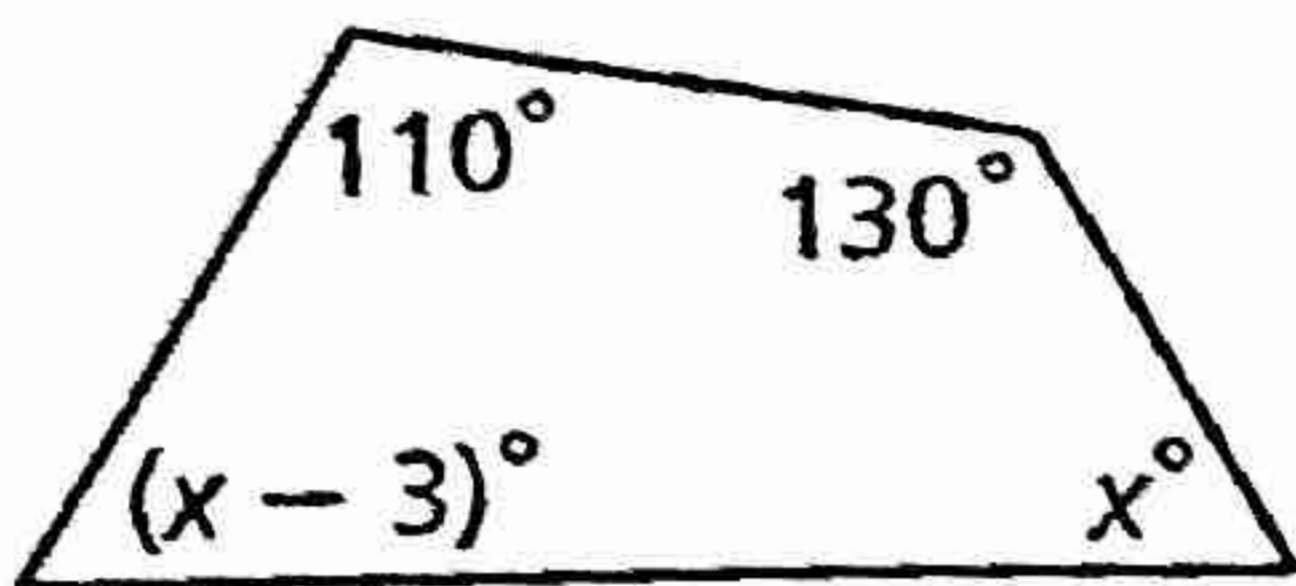
$$y = 8$$



$$4(8) - 4$$

$$BE = 28$$

7. Find the value of x.



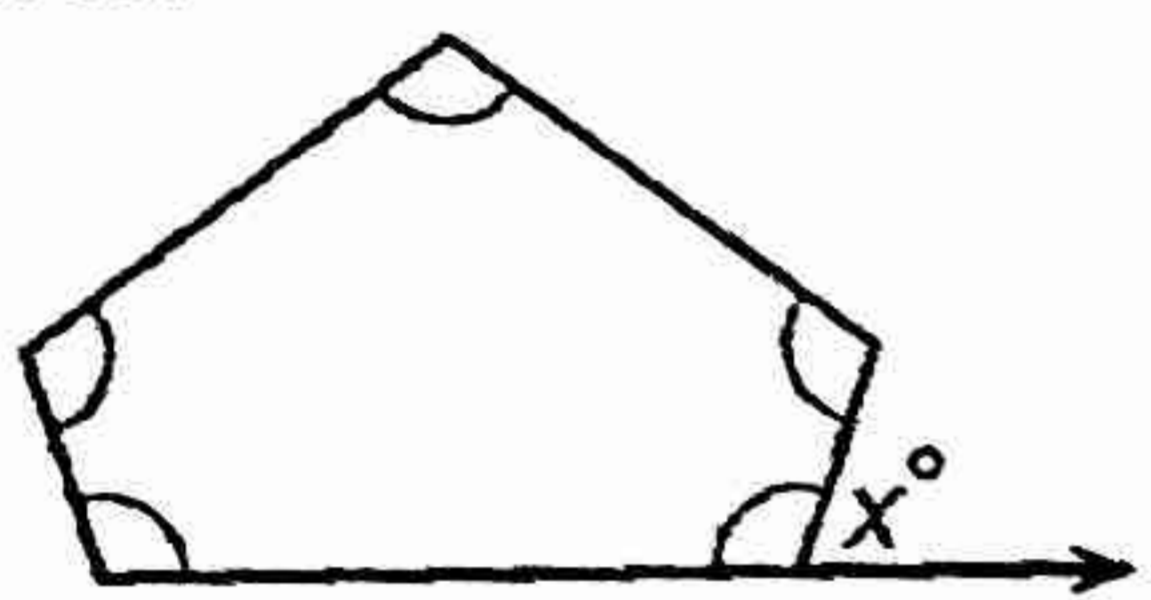
$$110 + 130 + x - 3 + x = 360$$

$$237 + 2x = 360$$

$$2x = 123$$

$$x = 61.5$$

9. Find x.



$$\frac{(n-2)180}{5} = \frac{540}{5} = 108$$

$$180 - 108$$

$$x = 72$$

11. Three vertices of parallelogram DFGH are D(-9, 4), F(-1, 5), and G(2, 0). Find the coordinates of vertex H.

$$m \text{ of } FG = \frac{-5}{3}$$

$$m \text{ of } DH = \frac{-5}{3}$$

$$H(-6, -1)$$

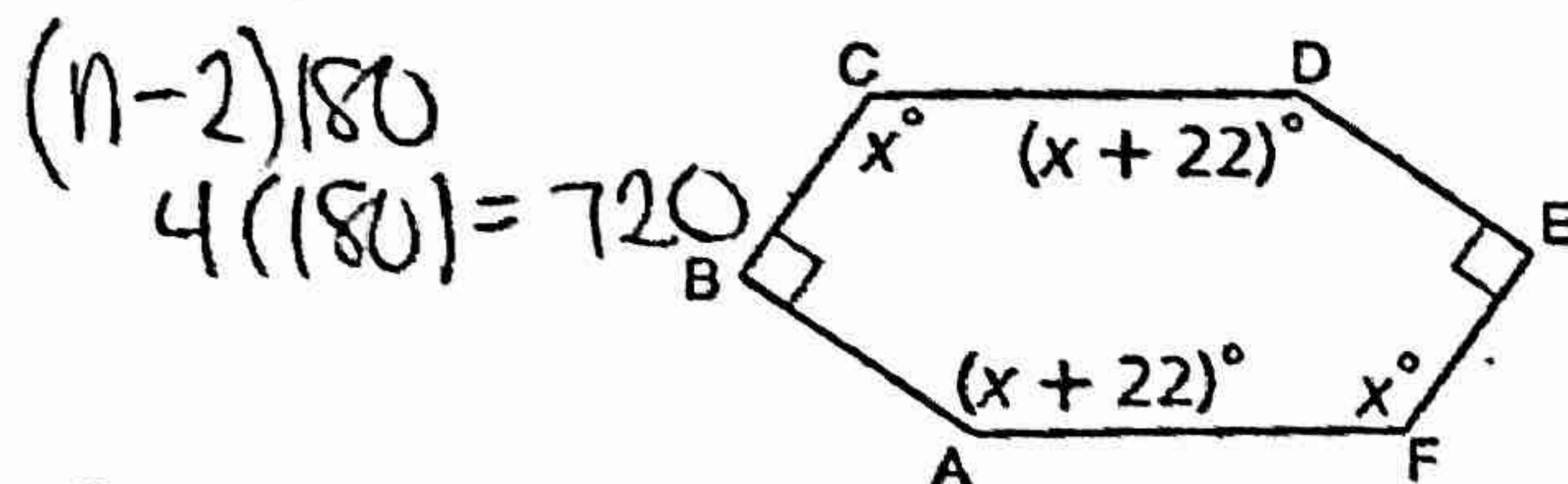
12. Three vertices of parallelogram PRTV are P(-4, -4), R(-10, 0), and V(5, -1). Find the coordinates of vertex T.

$$m \text{ of } PV = \frac{3}{9} = \frac{1}{3}$$

$$m \text{ of } RT = \frac{3}{9} = \frac{1}{3}$$

$$T(-1, 3)$$

8. Find  $m\angle A$ .



$$(n-2)180$$

$$4(180) = 720$$

$$90 + x + x + 22 + 90 + x + x + 22 = 720$$

$$224 + 4x = 720$$

$$4x = 496$$

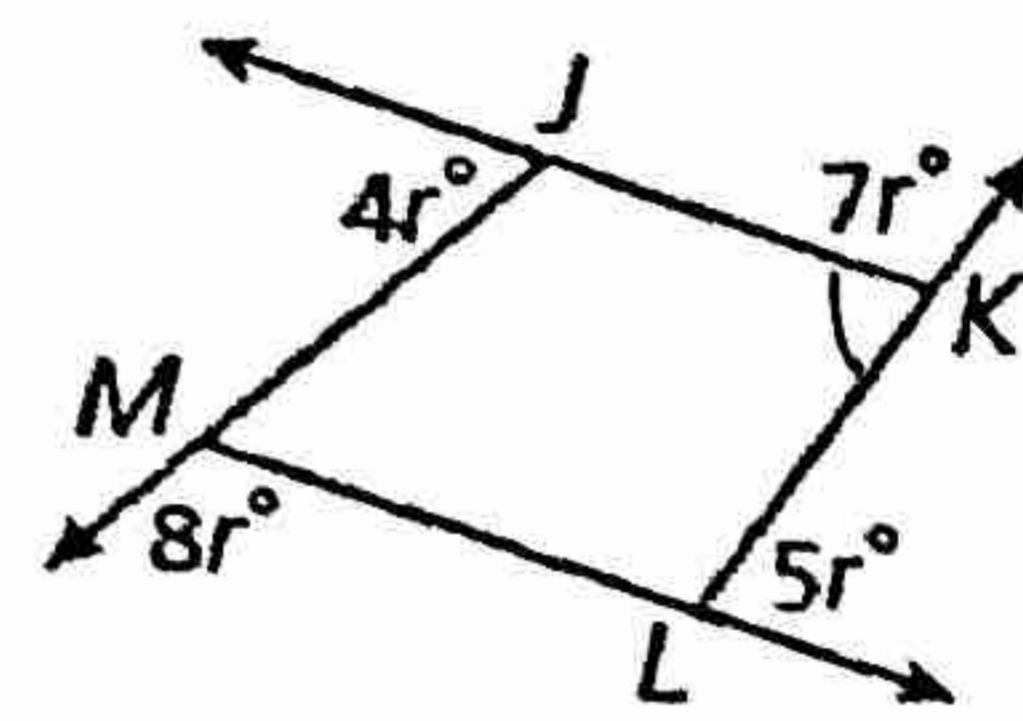
$$x = 124$$

$$x + 22$$

$$124 + 22$$

$$m\angle A = 146$$

10. Find  $m\angle JKL$ .



$$4r + 7r + 8r + 5r = 360$$

$$24r = 360$$

$$r = 15$$

$$7(15) = 105$$

$$180 - 105 = 75$$

$$m\angle JKL = 75$$

