

Name: _____ Hour: _____ Date: _____

Properties of Parallelograms -- Assignment

Questions 1 - 8: Complete each statement about parallelogram ABCD.

1. $\overline{AB} \parallel$

2. $\overline{AD} \cong$

3. $\overline{EC} \cong$

4. $\angle ADC \cong$

5. $\angle BCA \cong$

6. $\triangle BCD \cong$

7. $\angle BCD$ is supplementary to

8. $\angle A + \angle B + \angle C + \angle D =$

Questions 9 - 16: Find each measure for parallelogram HIJK. ($m\angle KHI = 84^\circ$)

9. $HI =$ 10. $KH =$

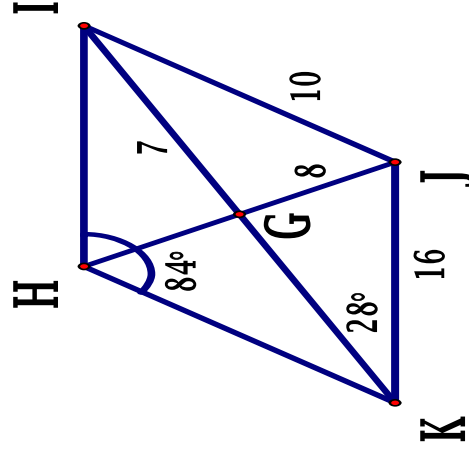
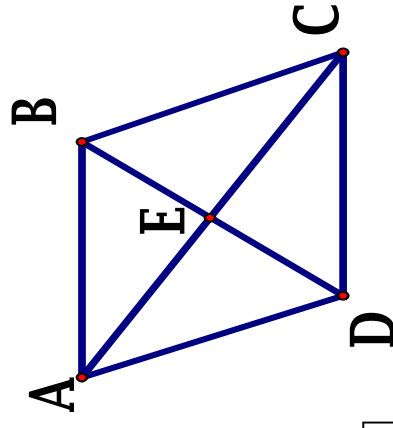
11. $GH =$

12. $HJ =$ 13. $m\angle KIH =$

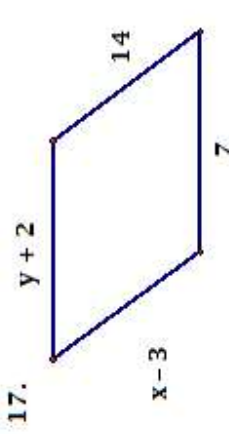
14. $m\angle JIH =$

15. $m\angle KJI =$

16. $m\angle HKI =$



Questions 17 - 25: Use the properties of parallelograms to find the value of x and y for each.



$$x = 17$$

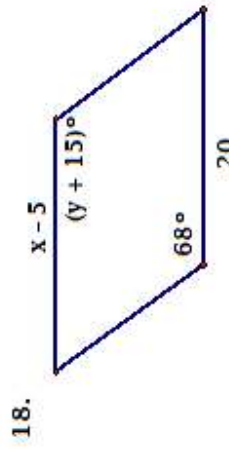
$$y = 5$$

$$y + 2 = 7$$

$$y = 5$$

$$x - 3 = 14$$

$$x = 17$$



$$x = 25$$

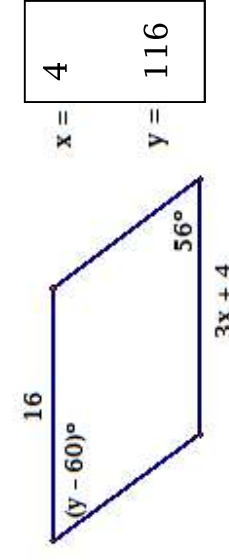
$$y = 53$$

$$y + 15 = 68$$

$$y = 53$$

$$x - 5 = 20$$

$$x = 25$$



$$x = 4$$

$$y = 116$$

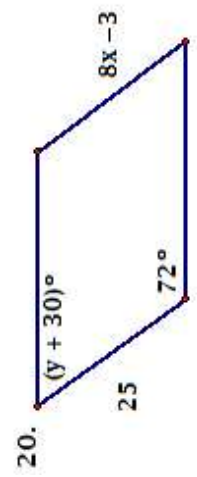
$$3x + 4 = 16$$

$$3x = 12$$

$$x = 4$$

$$y - 60 = 56$$

$$y = 116$$



$$x = 3.5$$

$$y = 78$$

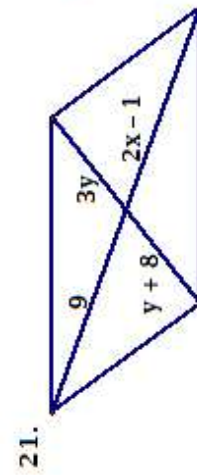
$$y + 30 + 72 = 180$$

$$y = 78$$

$$8x - 3 = 25$$

$$8x = 28$$

$$x = 3.5$$



$$x = 5$$

$$y = 4$$

$$3y = y + 8$$

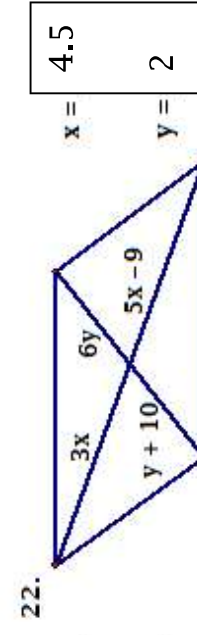
$$2y = 8$$

$$y = 4$$

$$2x - 1 = 9$$

$$2x = 10$$

$$x = 5$$



$$x = 4.5$$

$$y = 2$$

$$6y = y + 10$$

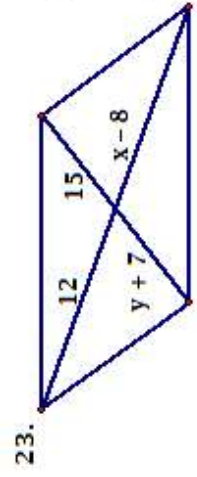
$$5y = 10$$

$$y = 2$$

$$5x - 9 = 3x$$

$$-9 = -2x$$

$$4.5 = x$$



$$x = 20$$

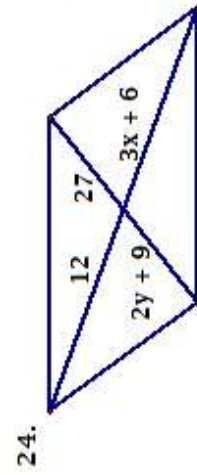
$$y = 8$$

$$y + 7 = 15$$

$$y = 8$$

$$x - 8 = 12$$

$$x = 20$$



$$x = 2$$

$$y = 9$$

$$2y + 9 = 27$$

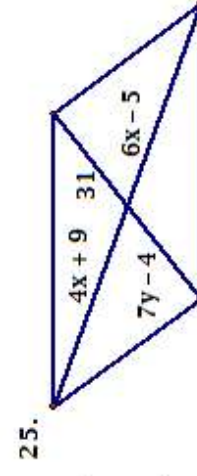
$$2y = 18$$

$$y = 9$$

$$3x + 6 = 12$$

$$3x = 6$$

$$x = 2$$



$$x = 7$$

$$y = 5$$

$$7y - 4 = 31$$

$$7y = 35$$

$$y = 5$$

$$4x + 9 = 6x - 5$$

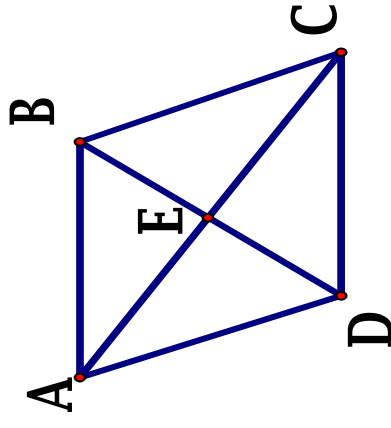
$$9 = 2x - 5$$

$$14 = 2x; 7 = x$$

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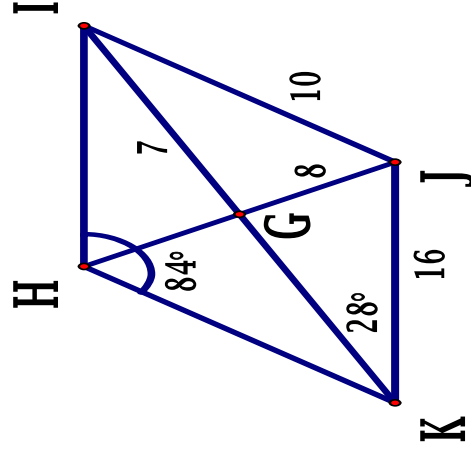
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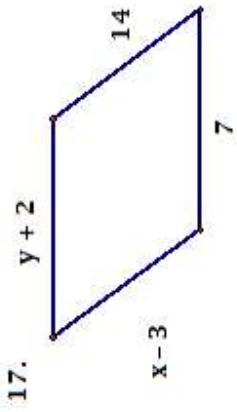
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- $\overline{AD} \cong$ _____
- $\overline{EC} \cong$ _____
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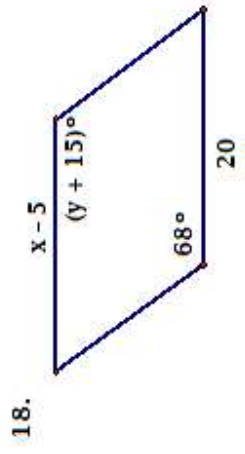


- $HI =$ _____
- $KH =$ _____
- $GH =$ _____
- $HJ =$ _____
- $m\angle KIH =$ _____
- $m\angle JIH =$ _____
- $m\angle KJI =$ _____
- $m\angle HKI =$ _____

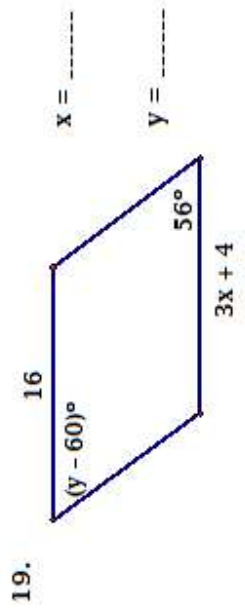
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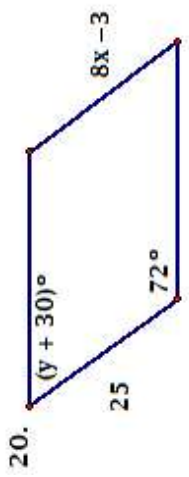
$x = \text{-----}$
 $y = \text{-----}$



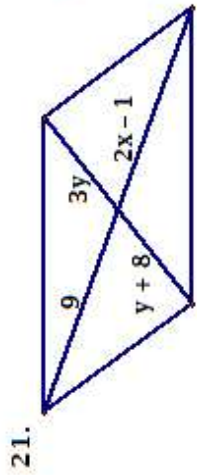
$x = \text{-----}$
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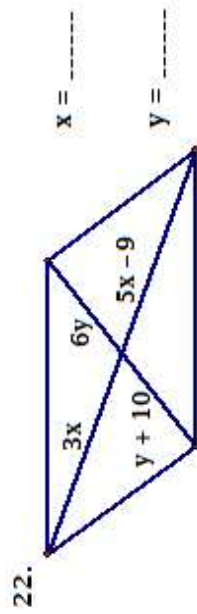
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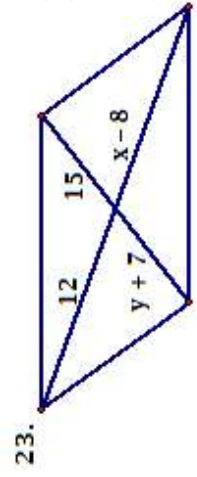
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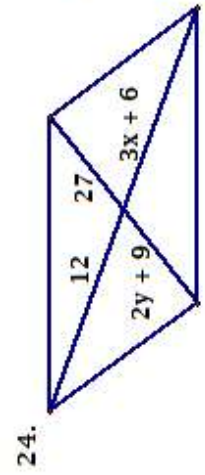
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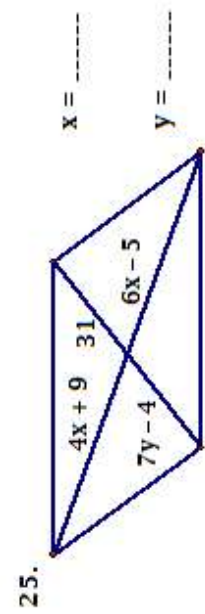
$x = \text{-----}$
 $y = \text{-----}$



$x = \text{-----}$
 $y = \text{-----}$



$x = \text{-----}$
 $y = \text{-----}$



$x = \text{-----}$
 $y = \text{-----}$