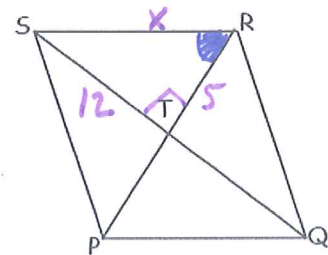


Directions: Use rhombus PQRS and the given information to find each value.

1. If $SQ = 24$, $RP = 10$, find SR . (hint: find $m\angle STR$ first!)

$m\angle STR = 90^\circ$ because diags of Rhombus are \perp .
 $12^2 + 5^2 = x^2$
 $169 = x^2$
 $SR = 13$



2. If $m\angle PRS = 17^\circ$, find $m\angle QRS$.

Geometry: $\angle QRS = 2\angle PRS$
 $\angle QRS = 2 \cdot 17$
 $\angle QRS = 34^\circ$
 Justification: diags of Rhombus bisect the angles.

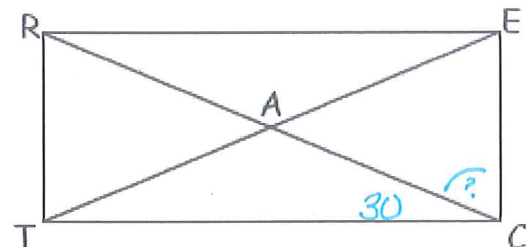
3. If $SP = 4x - 3$ and $PQ = 18 + x$, find x .

Geometry: $SP \cong PQ$
 $4x - 3 = 18 + x$
 $3x - 3 = 18$
 $+3 \quad +3$
 $3x = 21$
 $\frac{3x}{3} = \frac{21}{3}$
 $x = 7$
 Justification: def of Rhombus: all 4 sides \cong

Directions: Use rectangle RECT and the given information to find each value.

4. If $m\angle RCT = 30^\circ$, find $m\angle ECR$.

Geometry: $\angle RCT + \angle ECR = 90^\circ$
 $30 + \angle ECR = 90$
 $\angle ECR = 60^\circ$
 Justification: def of Rectangle: all \angle s are 90°



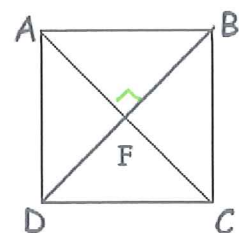
5. If $RC = 5x + 2$ and $AE = x + 14$, find the value of x .

Geometry: $RC = 2AE$
 $5x + 2 = 2(x + 14)$
 $5x + 2 = 2x + 28$
 $3x = 26$
 $x = \frac{26}{3} = 8.67$
 Justification: diags of a Rectangle are \cong

Directions: Use square ABCD and the given information to find each value.

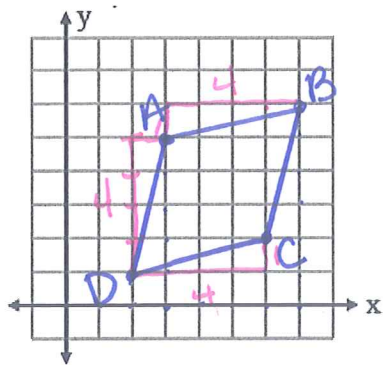
6. If $m\angle AFB = 16x + 6$, find x .

Geometry: $\angle AFB = 90^\circ$
 $16x + 6 = 90$
 $16x = 84$
 $x = 5.25$
 Justification: diags of squares are \perp



Directions: Graph and label each quadrilateral with the given vertices. Classify if it is a rhombus, rectangle, square or none of these. If it is a square, it must also be a rhombus and rectangle.

7. A(3,5), B(7,6), C(6,2), D(2,1)



$$\text{slope } AB = \frac{1}{4}$$

$$\text{slope } DA = \frac{4}{1} = 4$$

$$\text{slope } DC = \frac{1}{4}$$

$$\text{slope } BC = \frac{4}{1} = 4$$

$$AB^2 = 1^2 + 4^2$$

$$AB = \sqrt{17}$$

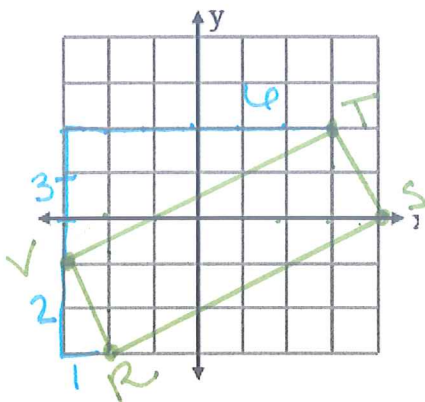
$$BC = \sqrt{17}$$

$$CD = \sqrt{17}$$

$$AD = \sqrt{17}$$

Conclusion: Rhombus because it has all 4 \cong sides.

8. R(-2,-3), S(4,0), T(3,2), V(-3,-1)



$$\text{slope } VT = \frac{3}{6} = \frac{1}{2}$$

$$\text{slope } VR = -2$$

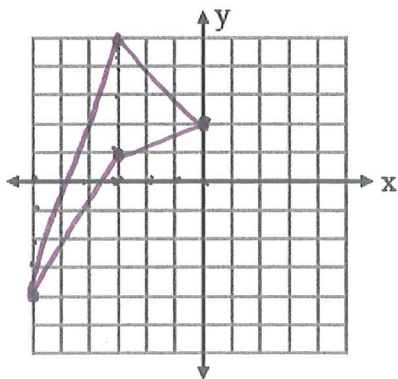
$$\text{slope } RS = \frac{3}{6} = \frac{1}{2}$$

$$\text{slope } TS = -2$$

conclusion

Rectangle because it has \perp slopes so 4 Right \angle s.

9. N(-6,-4), P(-3,1), Q(0,2), R(-3,5)



none ;)

Name: _____

PRACTICE: RECTANGLES, SQUARES, AND RHOMBI WORKSHEET B

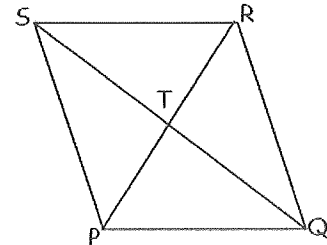
Directions: Use rhombus PQRS and the given information to find each value.

1. If $SQ = 24$, $RP = 10$, find SR . (hint: find $m\angle STR$ first!)

$m\angle STR =$ _____ because _____

2. If $m\angle PRS = 17^\circ$, find $m\angle QRS$.

Geometry: _____ **Justification:** _____



3. If $SP = 4x - 3$ and $PQ = 18 + x$, find x .

Geometry: _____ **Justification:** _____

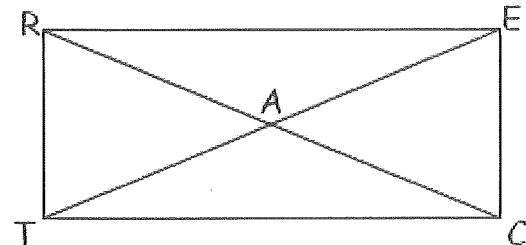
Directions: Use rectangle RECT and the given information to find each value.

4. If $m\angle RCT = 30^\circ$, find $m\angle ECR$.

Geometry: _____ **Justification:** _____

5. If $RC = 5x + 2$ and $AE = x + 14$, find the value of x .

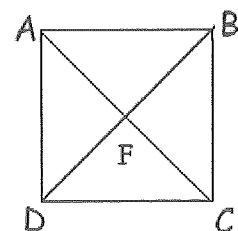
Geometry: _____ **Justification:** _____



Directions: Use square ABCD and the given information to find each value.

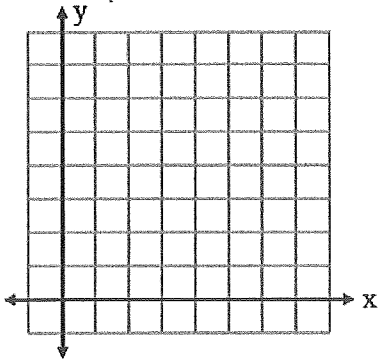
6. If $m\angle AFB = 16x + 6$, find x .

Geometry: _____ **Justification:** _____

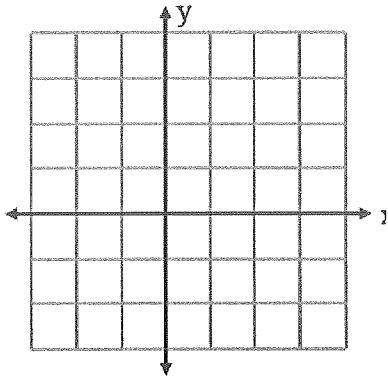


Directions: Graph and label each quadrilateral with the given vertices. Classify if it is a rhombus, rectangle, square or none of these. If it is a square, it must also be a rhombus and rectangle.

7. $A(3,5)$, $B(7,6)$, $C(6,2)$, $D(2,1)$



8. $R(-2,-3)$, $S(4,0)$, $T(3,2)$, $V(-3,-1)$



9. $N(-6,-4)$, $P(-3,1)$, $Q(0,2)$, $R(-3,5)$

