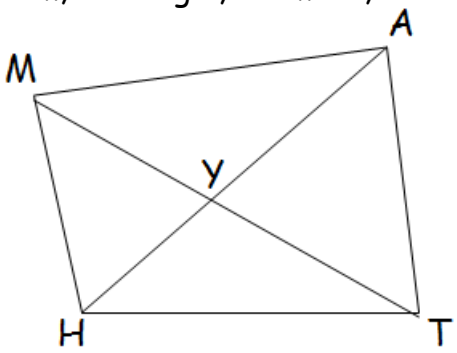
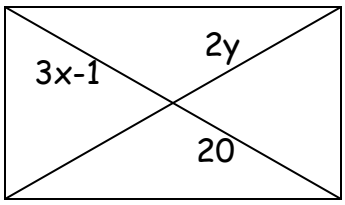
6.4 Homework  Name Key

1. A square is also a rhombus, rectangle, and a parallelogram. What diagonal properties does it inherit from each?
   a. rhombus - diags ⊥ and bisect ∠s
   b. rectangle - diags ≅
   c. parallelogram - diags bisect each other

2. Classify the quadrilateral (tell whether it is a parallelogram, rectangle, rhombus, or square) based on the given information.
   a. $\overline{MT} \cong \overline{AH}$, and MT and AH bisect each other rectangle
   b. $\overline{MA} \cong \overline{HT}$ and $\overline{MA} \parallel \overline{HT}$ parallelogram
   c. $\overline{MA} \cong \overline{AT} \cong \overline{TH} \cong \overline{HM}$ rhombus
   d. ∠MYA is a right angle, and MT and AH bisect each other rhombus



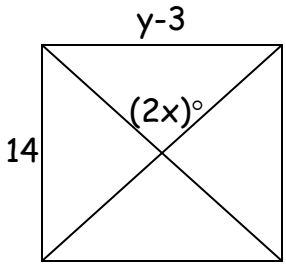
Solve for x and y based on the given shape.

3. 

Rectangle

$3x-1=20$, $x=7$

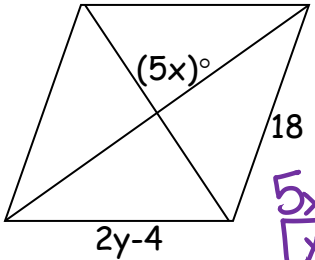
$2y=20$, $y=10$

4. 

Square

$2x=90$, $x=45$

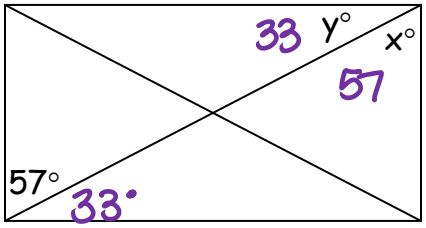
$y-3=14$, $y=17$

5. 

Rhombus

$5x=90$, $x=18$

$2y-4=18$, $2y=22$, $y=11$

6. 

Rectangle

$x=57$

$y=33$