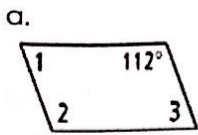
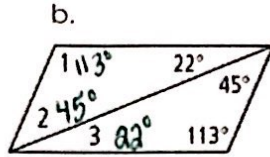


Day 1 – Properties of Parallelograms – Practice

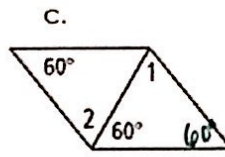
1. Find the value of the numbered missing angles in each parallelogram.



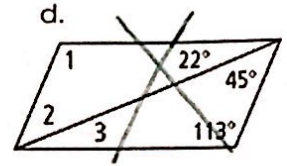
$\angle 1 = 68^\circ$
 $\angle 2 = 112^\circ$
 $\angle 3 = 68^\circ$



$\angle 1 = 113^\circ$
 $\angle 2 = 45^\circ$
 $\angle 3 = 22^\circ$

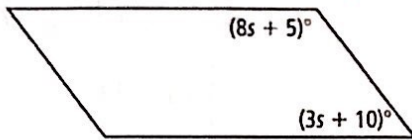


$\angle 1 = 60^\circ$
 $\angle 2 = 60^\circ$



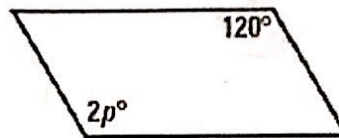
Solve for each variable and justify which parallelogram property you are using to solve for the variable.

a. consecutive \angle 's are supp



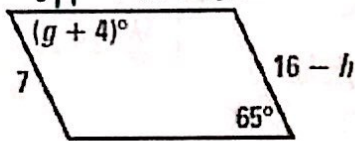
$8s + 5 + 3s + 10 = 180$
 $11s + 15 = 180$
 $11s = 165$
 $s = 15$

b. opp \angle 's are \cong



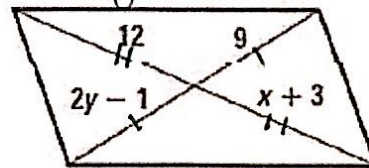
$2p = 120$
 $p = 60$

c. opp \angle 's are \cong
 opp sides are \cong



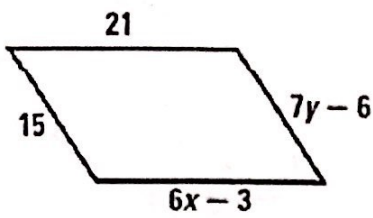
$16 - h = 7$
 $-h = -9$
 $h = 9$
 $g + 4 = 65$
 $g = 61$

d. Diagonals bisect each other



$x + 3 = 12$
 $x = 9$
 $2y - 1 = 9$
 $2y = 10$
 $y = 5$

e. opp sides are \cong



$$6x - 3 = 21$$

$$6x = 24$$

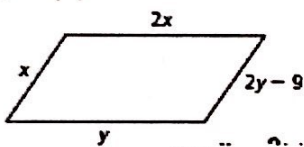
$$x = 4$$

$$7y - 6 = 15$$

$$7y = 21$$

$$y = 3$$

g. opp sides are \cong



$$x = 2y - 9$$

$$y = 2x$$

$$x = 2(2x) - 9$$

$$x = 4x - 9$$

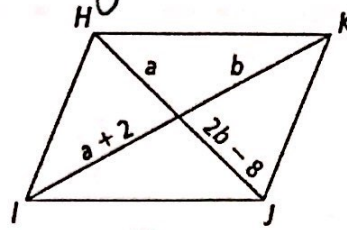
$$-3x = -9$$

$$\boxed{x = 3}$$

$$y = 2(3)$$

$$\boxed{y = 6}$$

f. Diagonals bisect each other



Requires substitution

$$b = a + 2$$

$$a = 2b - 8$$

$$b = 2b - 8 + 2$$

$$b = 2b - 6$$

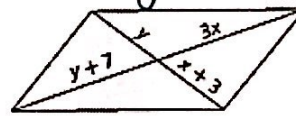
$$-b = -6$$

$$\boxed{b = 6}$$

$$a = 2(6) - 8$$

$$\boxed{a = 4}$$

h. Diagonals bisect each other



$$y = x + 3$$

$$y + 7 = 3x$$

$$x + 3 + 7 = 3x$$

$$x + 10 = 3x$$

$$10 = 2x$$

$$\boxed{5 = x}$$

$$y = 5 + 3$$

$$\boxed{y = 8}$$