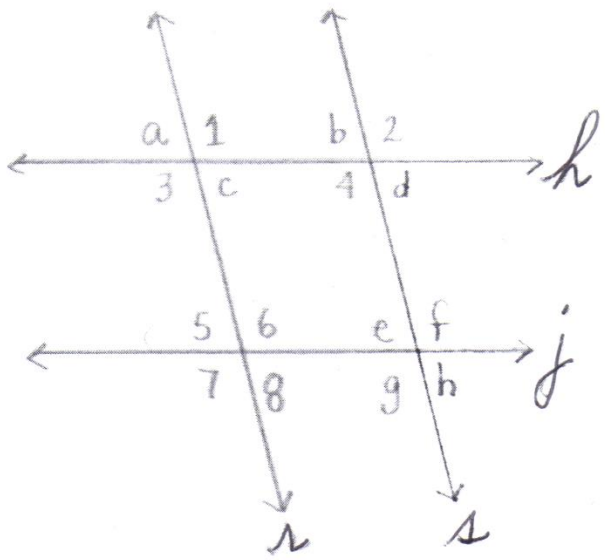


- Answer Key

Math 2 Chapter 3 Practice Quiz #5

1. There may be more than one correct answer.



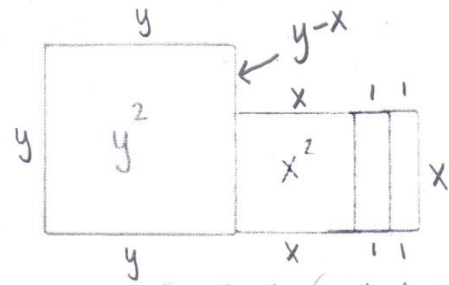
- Corresponding:  $3\angle$  and  $\angle$  4 or  $\angle 3 \hat{=} \angle 7$
- Alternate Interior:  $g\angle$  and  $\angle$  6
- Vertical:  $d\angle$  and  $\angle$  b
- Same-Side Interior:  $4\angle$  and  $\angle$  c or  $\angle 4 \hat{=} \angle e$
- Linear Pair:  $h\angle$  and  $\angle$  g or  $\angle h \hat{=} \angle f$

2. If  $h \parallel j$  and  $r \parallel s$  in the figure above what relationship does each pair of angles below have? Circle supplementary or congruent.

- vertical  $\angle a$  and  $\angle c$  supplementary or congruent
- corresponding  $\angle 8$  and  $\angle c$  supplementary or congruent
- same side interior  $\angle f$  and  $\angle d$  supplementary or congruent
- linear pair  $\angle a$  and  $\angle 1$  supplementary or congruent
- same side interior  $\angle 3$  and  $\angle 5$  supplementary or congruent
- alt interior  $\angle 1$  and  $\angle 4$  supplementary or congruent

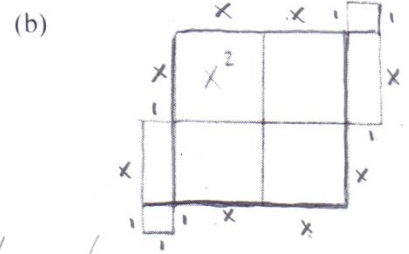
3. Find the perimeter of the figures below.

label then add up all the sides



$$y + y + y + x + 1 + 1 + x + 1 + 1 + x + y - x$$

Perimeter =  $4y + 2x + 4$



$$x + x + x + x + x + x + x + x + x + x + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1$$

Perimeter =  $8x + 8$

4. Solve each system of equations by using the elimination method.

step 1: get rid of x  
 step 2: multiply 1st equation by 5  
 step 3: add together  
 step 4: solve  
 step 5: plug back in  
 step 6: check work

$$\begin{array}{r} (a) \quad 5(-x + 6y = 11) \\ \quad 5x + 2y = -23 \\ \hline \quad -5x + 30y = 55 \end{array}$$

$$\frac{32y}{32} = \frac{32}{32}$$

$$y = 1 \quad 5x + 2(1) = -23$$

$$5x + 2 = -23$$

$$\frac{-2}{-2} \quad \frac{-25}{-2}$$

$$5x = -25$$

$$x = -5$$

$$(-5, 1)$$

$$\begin{array}{l} -(-5) + 6(1) = 11 \\ 5 + 6 = 11 \checkmark \\ 5(-5) + 2(1) = -23 \\ -25 + 2 = -23 \checkmark \end{array}$$

$$\begin{array}{r} (b) \quad 2(2x - 2y = 12) \\ \quad 4x + 4y = 8 \\ \hline \quad 4x - 4y = 24 \end{array}$$

$$\frac{8x}{8} = \frac{32}{8}$$

$$x = 4$$

$$4(4) + 4y = 8$$

$$\frac{16 + 4y = 8}{-16} \quad \frac{-8}{-16}$$

$$4y = -8$$

$$y = -2$$

$$(4, -2)$$

step 1: get rid of y  
 step 2: multiply equation 1 by 2  
 step 3: add together  
 step 4: solve  
 step 5: plug back in  
 step 6: check

$$2(4) - 2(-2) = 12$$

$$8 + 4 = 12 \checkmark$$

$$4(4) + 4(-2) = 8$$

$$16 - 8 = 8 \checkmark$$

- Step 1: Decide which variable you want to "eliminate"
- Step 2: If you can't eliminate that variable by just adding the two equations together you will need to multiply one equation by a number so it ends up being the opposite of the coefficient of the variable you are eliminating.
- Step 3: Add the equations together. That will eliminate the variable you chose in step one.
- Step 4: Solve for the other variable
- Step 5: Plug that solution into either of the original equations.
- Step 6: Check your work by plugging back in to both equations