1. Solve this equation for M. $\dfrac{W - AM}{R} + E = W$
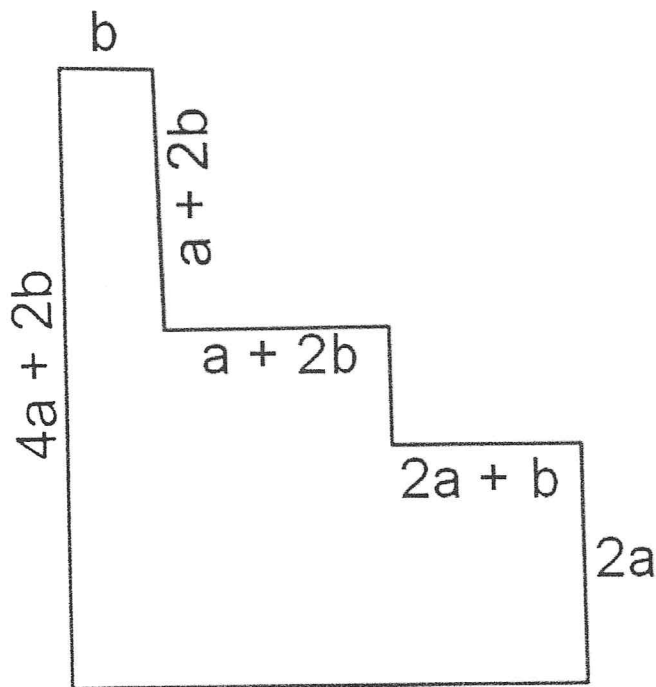
2. Solve this equation for B. $H + X(A + B) = C$

3. Solve this equation for G. $DG - PG = Z$

4. Find an expression for the missing lengths on this figure then write an expression for the perimeter. All angles are right angles. Simplify your answer.

5. Amani left her house riding her bike at a speed of 12 mph. Her brother left their house an hour later riding 16 mph trying to catch up with Amani. Write and solve a system of equations in order to find our how long it took Amani's brother to catch up with her.

Algebra 2   Bellwork   Monday, September 8, 2014

1. Solve this equation for M. $\dfrac{W - AM}{R} + E = W$

Restrictions:
$R \neq 0$
$A \neq 0$

$$M = \frac{R(W-E) - W}{-A}$$

2. Solve this equation for B. $H + X(A + B) = C$

Restrictions:
$X \neq 0$

$$B = \frac{C-H}{X} - A \quad \text{or} \quad B = \frac{C - H - XA}{X}$$

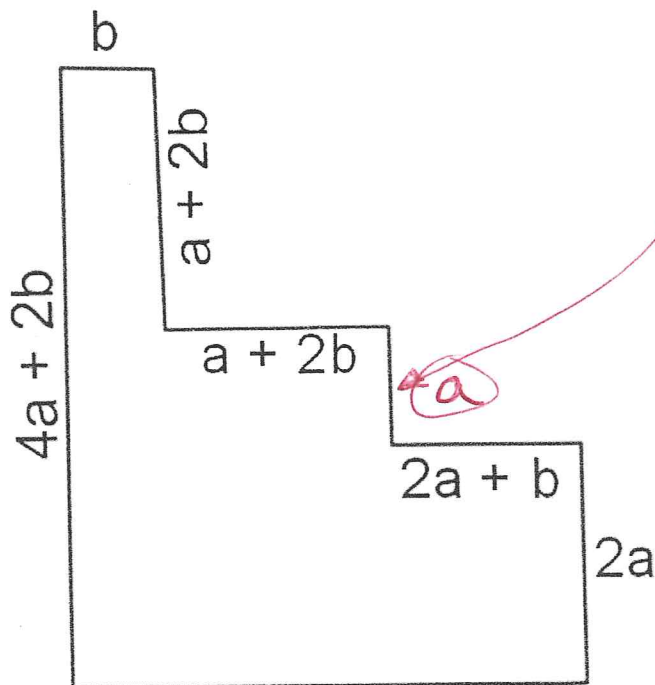3. Solve this equation for G. $DG - PG = Z$

Restrictions:
$D - P \neq 0$
or
$D \neq P$

FACTOR OUT G

$$G(D - P) = Z$$

$$G = \frac{Z}{D-P}$$

4. Find an expression for the missing lengths on this figure then write an expression for the perimeter. All angles are right angles. Simplify your answer.

$(4a + 2b) - (a + 2b + 2a)$

$(4a + 2b) - (3a + 2b) = a$

Perimeter
$$14a + 12b$$

$b + a + 2b + 2a + b = \boxed{3a + 4b}$

5. Amani left her house riding her bike at a speed of 12 mph. Her brother left their house an hour later riding 16 mph trying to catch up with Amani. Write and solve a system of equations in order to find our how long it took Amani's brother to catch up with her.

	Amani	Brother
	12 mph	16 mph
r		
t	t	$t - 1$
d	$12t$	$16(t-1)$

distances are $=$

$12t = 16(t-1)$
$12t = 16t - 16$
$16 = 4t$
$t = 4$ $\boxed{3 \text{ hrs}}$