DIG INTO EQUATIONS: A POLYGON AREA PUZZLE

1. Build equations based upon the areas of the shapes. Record several in the table below.

   Example: $A = 2B$.

2. How could you sort these equations into categories?

3. Given: H = 36 square units;

   G = _____; $\frac{1}{3}J$ = _____; $A + B$ = _____

4. Explain why $2G + H = P + 2(N + D)$.

5. Find D if $G = 3$, $H = 18$, $P = 12$, and $N = 2$.

6. Finish the Equation column (the first two are done as examples)

Given expression	Written in terms of this variable	Equation
A	B	$A = 2B$
B	A	$B = \frac{1}{2}A$
$B + C$	D	$B + C =$ _____
J	A	
$2(B + C)$	J	

Adapted from *MathLinks*: Grade 7

POLYGON PUZZLE PIECES