

Honors Advanced Algebra

Review Key Concepts – Day 1

DATE: 8/26/14

PEMDAS - Follow order of operations

Evaluate each expression.

- ① Parenthesis
 - ② Exponents
 - ③ Multiplication
 - ④ Division
 - ⑤ Addition
 - ⑥ Subtraction
- } From left to right

$$\begin{aligned}
 1) & ((-16 - (-2 + 1)) \cdot 2) \div 5 \\
 & = ((-16 - (-1)) \cdot 2) \div 5 \\
 & = ((-16 + 1) \cdot 2) \div 5 \\
 & = ((-15) \cdot 2) \div 5 \\
 & = (-30) \div 5 = \boxed{-6}
 \end{aligned}$$

6) $75 = 3(-6n - 5)$ Distribute

$$\begin{array}{r}
 75 = -18n - 15 \\
 +15 \qquad +15 \\
 \hline
 90 = -18n \\
 -18 \qquad +18 \\
 \hline
 -5 = n
 \end{array}$$

$\boxed{-5 = n}$

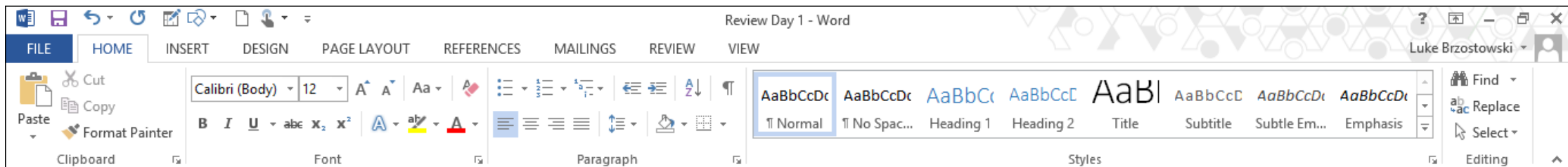
2) $(2 - 5)^2 \div 4$

$$\begin{aligned}
 & (-3)^2 \div 4 \\
 & 9 \div 4 = \boxed{\frac{9}{4} = 2.25}
 \end{aligned}$$

7) $-10n + 3(8 + 8n) = -6(n - 4)$

Evaluate the following expression using the

Think
 $(-3)^2 = (-3) \cdot (-3) = 9$



Evaluate the following expression using the values given.

Substitute values into expression

3) $-3 \div 3(a + c(b + 5) - (-6 + a))$ if $a=1, b=-6, c=-4$.

$$-3 \div 3(1 + (-4)(-6 + 5) - (-6 + 1))$$

$$= -3 \div 3(1 - 4(-1) - (-5))$$

$$= -3 \div 3(1 + 4 + 5)$$

$$= -3 \div 3(10) = -1 \cdot 10 = \boxed{-10}$$

P
E
M
D
A
S

Simplify the expression.

Combine Like terms

4) $-10(x - 7) - 7(x + 2)$

$$-10x + 70 - 7x - 14$$

$$\boxed{-17x + 56}$$

7) $-10n + 3(8 + 8n) = -6(n - 4)$ Distribute

$$-10n + 24 + 24n = -6n + 24$$

Combine Like terms

$$14n + 24 = -6n + 24$$

$$+6n \quad +6n$$

$$20n + 24 = 24$$

$$-24 \quad -24$$

$$\frac{20n}{20} = \frac{0}{20}$$

$$\boxed{n = 0}$$

8) $-11 + 10(p + 10) = 4 - 5(2p + 11)$

Review Day 1 - Word

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Solve each equation for the indicated variable.

$$5) \quad -3(4r - 8) = -36$$

$$\begin{array}{r} -12r + 24 = -36 \\ \underline{-24 \quad -24} \\ -12r = -60 \\ \underline{-12 \quad -12} \\ r = 5 \end{array}$$

$$8) \quad -11 + 10(p + 10) = 4 - 5(2p + 11)$$

$$\begin{array}{r} -11 + 10p + 100 = 4 - 10p - 55 \\ \hline \end{array}$$

$$\begin{array}{r} 10p + 89 = -51 - 10p \\ +10p \qquad +10p \\ \hline \end{array}$$

$$\begin{array}{r} 20p + 89 = -51 \\ -89 \quad -89 \\ \hline \end{array}$$

$$\begin{array}{r} 20p = -140 \\ \underline{20 \quad 20} \end{array}$$

$$p = -7$$

