First Quiz
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1. Evaluate each of the following expressions:

(a) $-6^2 - 4(5 - 2 \cdot 7)$ $= -36 - 4(5-14)$

$= -36 - 4(-9)$

$= -36 + 36$

$= \boxed{0}$

(b) $7 - (3 - 16 \div 8 \cdot 2)$ $= 7 - (3 - 2 \cdot 2)$

$= 7 - (3-4)$

$= 7 - (-1)$

$= \boxed{8}$

(c) $\dfrac{3 \cdot 5 - 3(7-5)^2 + 2^3}{2(-3) - (-2)^4}$ $= \dfrac{3 \cdot 5 - 3(2)^2 + 2^3}{2(-3) - 16}$

$= \dfrac{15 - 12 + 8}{-6 - 16} = \dfrac{11}{-22} = \boxed{-\dfrac{1}{2}}$

2. Evaluate the expression $x^2 - 2xy + y^2$, when $x = 3$ and $y = -2$.

$(3)^2 - 2(3)(-2) + (-2)^2 = 9 + 12 + 4$

$= \boxed{25}$

3. Evaluate the expression

$$\frac{-x^2+3}{2-x}$$

when $x = -2$.

A. $\frac{1}{4}$

B. $-\frac{1}{4}$

C. $\frac{12}{5}$

D. -12

$$\frac{-(-2)^2+3}{2-(-2)} = \frac{-4+3}{2+2} = \frac{1}{4}$$

For the following statements indicate whether they are true or false:

4. If $x = \frac{1}{2}$ and $y = -\frac{2}{3}$, then $4x + 6y = -2$

A. True B. False.

5. If $x = -2$ and $y = 4$, then $x^2 + y = y^2 + 3x - 1$

A. True B. False.

4 $4\left(\frac{1}{2}\right)^2 + 6\left(-\frac{2}{3}\right)^2 = -2$

$2 - 4 = -2$ ✓

5 $(-2)^2 + (4) = (4)^2 + 3(-2) - 1$

$4 + 4 = 16 - 6 - 1$

$8 = 9$ ✗