Exit Ticket- Function Notation   NAME____Key_____HOUR_____

Use the given functions to perform the indicated operations.

$$j(x) = x^2 + 3x - 8 \qquad k(x) = -x^3 + 2x^2 + 5x - 15 \qquad m(x) = 3x^2 - x$$

1. $j(3) = (3)^2 + 3(3) - 8$

$= 9 + 9 - 8$

$= 10$

2. $k(-2) = -(-2)^3 + 2(-2)^2 + 5(-2) - 15$

$= -(-8) + 2(4) - 10 - 15$

$= 8 + 8 - 10 - 15 \quad = -9$

3. $m(2) = 3(2)^2 - 2$

$= 3(4) - 2$

$= 10$

4. $j(3x) = (3x)^2 + 3(3x) - 8$

$= 9x^2 + 9x - 8$

5. $k(-x) = -(-x)^3 + 2(-x)^2 + 5(-x) - 15$

$= -(-x^3) + 2(x^2) - 5x - 15$

$= x^3 + 2x^2 - 5x - 15$

6. $m(x-1) = 3(x-1)^2 - (x-1)$

$(x-1)(x-1)$

$x^2 - x - x + 1$

$x^2 - 2x + 1$

$= 3(x^2 - 2x + 1) - x + 1$

$= 3x^2 - 6x + 3 - x + 1$

$= 3x^2 - 7x + 4$