

Question:	1	2	Total
Points:	2	8	10
Score:			

1. (2 points) Evaluate the value of the following quadratic polynomial if  $t = 2$ :

$$\frac{1}{2}t^2 - 3t + 1 =$$

**Solution:**

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

2. (8 points) Simplify the following expressions:

a.

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

**Solution:**  $3x^2(x + 2) = 3x^3 + 6x^2$

b.

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

**Solution:**  $(2x - 8) + (x^2 + 3x - 1) = x^2 + 5x - 9$

c.

$$(y + 4)(y + 1) =$$

**Solution:**  $(y + 4)(y + 1) = y^2 + 5y + 4$

d.

$$(3x + 5)(x - 3) =$$

**Solution:**  $(3x + 5)(x - 3) = 3x^2 - 9x + 5x - 15 = 3x^2 - 4x - 15$