

# Algebra CH11 Practice Test

1. Classify this polynomial by degree and terms:

a.  $-3x^2 - 15x + 7$

degree = 2 trinomial (3 terms)

b.  $3w^5$

monomial / 5  
(one term)

c.  $7x^3 - 2x - 9x^3 + 1 - 3x^{10}$

5 terms / degree = 10

2. Simplify each:

a.  $(3x^3 + 5x^2 - 1) + (x^3 - 4x^2 + 2x - 5)$

$4x^3 + x^2 + 2x - 6$

b.  $(3x^3 + 5x^2 - 1) - (5x^3 + 4x^2 - 2x - 5)$

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

c.  $(3a^2 - 1)(5a^3 + 3)$

$15a^6 + 9a^2 - 6a^3 - 3$

$15a^6 - 6a^3 + 9a^2 - 3$

d.  $(6x + 2)^2$

$(6x + 2)(6x + 2)$

$36x^2 + 24x + 4$

e.  $(2x - 4)(2x^2 + 8x - 4)$

$4x^3 + 16x^2 - 8x - 8x^2 - 32x + 16$

$4x^3 + 8x^2 - 40x + 16$

f.  $(w - 2y)(w + 2y)$

$w^2 + 2wy - 2wy - 4y^2$

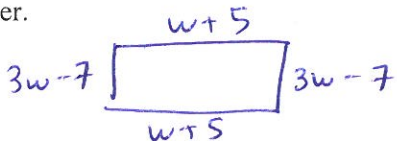
$w^2 - 4y^2$

3. Rewrite the polynomial in standard form and circle the leading coefficient

$-5x + 7x^3 - 15x^5 + 20$

$-15x^5 + 7x^3 - 5x + 20$

4. The width of a rectangle is  $(3w - 7)$  and its length is  $(w + 5)$ . Write an expression to represent the rectangle's perimeter.



Perimeter =  $(w + 5) + (3w - 7) + (w + 5) + (3w - 7)$   
(distance around shape)

$8w - 4$

5. Write an example of a trinomial with a degree of 6.

answers vary (3 terms) (highest exponent)

$3w^6 - 2w^2 + 5$