Name: _____

Unit 2 Factors and Products Practice Test

1. Expand and simplify each expression.

a) $-2a^4(7a^3c^5)$

b) $(r+11)(r-6)$

c) $2(x+3)(x+5)$

d) $(2x+5)^2$

e) $x+2(x-1)(3x+1)$

f) $(2x-3)(1-2x)-(x-3)$

g) $3-7(x+4)+4(1-5x)$

h) $3y(y^2-y-1)-2y(3y^2-6)$

2. Factor each polynomial

a) $9a^2 + 12a^3$

b) $3x^2 + 6x^4$

c) $25x^3y + 15x^4y^3 - 30x^2y^2$

d) $-4r^2s^2 + 12r^2s^3 - 36rs^2$

3. Factor each trinomial

a) $t^2 + 10t + 21$

b) $m^2 - 11m + 24$

c) $x^2 - 12x + 35$

d) $-4x^2 - 16x + 128$

e) $3x^2 + 5x - 2$

f) $6x^2 - 7x - 10$

g) $6x^2 - 21x + 9$

h) $24m^2 - 2m - 70$

4. Replace each ■ with a number that will a trinomial that can be factored

a) $x^2 + ■x + 6$

b) $x^2 + ■x - 12$

c) $w^2 - ■w + 24$

d) $x^2 - ■x - 18$

5. Identify each polynomial as a perfect square trinomial, difference of squares, or other. Justify your answer.

a) $25x^4 - 26y^2$

b) $4a^2 + 20a + 25$

6. Factor each polynomial. Identify each polynomial as a perfect square trinomial or a difference of squares.

a) $x^2 - 64$

b) $121x^2 - 100y^2$

c) $5w^4 - 80$

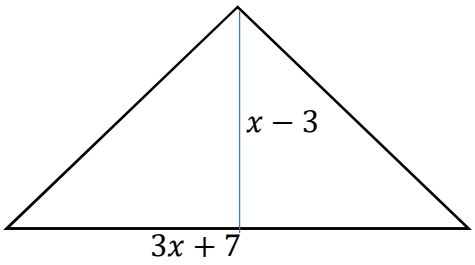
d) $9a^2 + 48a + 64$

e) $121m^2 - 22m + 1$

f) $4 + 28r + 49r^2$

7. Determine the area of the triangle

Area of a triangle $A = \frac{1}{2}(base)(height)$



8. Find the area of each rectangle. Write a polynomial that represents the shaded area.