

Practice Quiz

Add or subtract:

$$1. (-12y - 8) - (6y + 14)$$

$$\boxed{-18y - 22}$$

$$2. (15x^2 + 9xy - 7y^2) + (-6x^2 + 8xy - 5y^2)$$

$$\boxed{9x^2 + 17xy - 12y^2}$$

$$3. (3x^2 - 7x + 11) + (-5x^2 + 9x - 6)$$

$$\boxed{-2x^2 + 2x + 5}$$

$$4. (\cancel{3x^3} - \cancel{4x} + \cancel{7}) + (\cancel{2x^2} - \cancel{8x^3} + \cancel{5x}) - (\cancel{2} + \cancel{7x} - \cancel{11x^2})$$

$$\boxed{-5x^3 + 8x + 5 - 9x^2}$$

Find each Product:

$$1. 2x(x^2 - 3x + 7)$$

$$\boxed{2x^3 - 6x^2 + 14x}$$

$$2. -2m^2(-3m^3 - 4m + 7)$$

$$\boxed{6m^5 + 8m^3 - 14m^2}$$

$$3. (x+5)(x+9)$$

$$x^2 + 9x + 5x + 45$$

$$\boxed{x^2 + 14x + 45}$$

$$4. (y-8)(y+3)$$

$$y^2 + 3y - 8y - 24$$

$$\boxed{y^2 - 5y - 24}$$

$$5. (x-7)(x-9)$$

$$x^2 - 9x - 7x + 63$$

$$\boxed{x^2 - 16x + 63}$$

$$6. (a+11)(a-6)$$

$$a^2 - 6a + 11a - 66$$

$$\boxed{a^2 + 5a - 66}$$

$$7. (6a-3)(7a+4)$$

$$42a^2 + 24a - 21a - 12$$

$$\boxed{42a^2 + 3a - 12}$$

$$8. (2x-9)(4x-5)$$

$$8x^2 - 10x - 36x + 45$$

$$\boxed{8x^2 - 46x + 45}$$

Simplify Each expression:

$$1. x(4x-3) + 6x^2$$

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

$$\boxed{11x^3 - 3}$$

$$2. 3x(x-5) + 6x(x+2)$$

$$3x^2 - 15x + 6x^2 + 12x$$

$$9x^2 - 15x + 12x$$

$$21x^5 - 15x$$

$$\boxed{6x^4}$$

$$3. 3x^3 - 7x(x^2 + 2)$$

$$3x^3 - 7x^3 - 14x$$

$$-4x - 14x$$

$$\boxed{-18x}$$

Find each Product:

$$1. (x+6)(x+6)$$

$$x^2 + 6x + 6x + 36$$

$$\boxed{x^2 + 12x + 36}$$

$$2. (x-5)^2 = (x-5)(x-5)$$

$$x^2 - 5x - 5x - 25$$

$$\boxed{x^2 - 10x - 25}$$

$$3. (3x+7)^2 = (3x+7)(3x+7)$$

$$9x^2 + 21x + 21x + 49$$

$$\boxed{9x^2 + 42x + 49}$$

$$4. (x-7)(x+7)$$

$$x^2 + 7x - 7x - 49$$

$$\boxed{x^2 - 49}$$

$$5. (x+11)(x-11)$$

$$x^2 - 11x + 11x - 121$$

$$\boxed{x^2 - 121}$$

$$6. (5x+4)(5x-4)$$

$$25x^2 - 20x + 20x - 16$$

$$\boxed{25x^2 - 16}$$