

## Notes: Algebraic Expressions → Review

Translate each sentence into an expression.

1. Three times a number increased by 10. \_\_\_\_\_
2. Twice a number less than 6. \_\_\_\_\_
3. The quotient of a number and seven more than 12.  
\_\_\_\_\_
4. The product of five and a number decreased by 13  
\_\_\_\_\_
5. Four times the sum of a number and 20. \_\_\_\_\_
6. The difference of ten and two-thirds of a number.  
\_\_\_\_\_

Simplify algebraic expressions: add and subtract like terms

### Like Terms

5x	4x
-3m <sup>2</sup>	m <sup>2</sup>
7xy	2yx
$\frac{2}{5}a$	-a

### Unlike Terms

5x	2y
-3x	4
4x <sup>2</sup>	-7x <sup>3</sup>
-5x	6x <sup>2</sup>

Examples:

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

2.  $(-4x^4 + 14 + 3x^2) + (-3x^4 - 14x^2 - 8)$

3.  $(5a + 4) - (10a + 2)$

4.  $(8y - 3y^4 + 10y^2) - (3y^2 + 11y^4 - 11y)$

5.  $-7x + 5(-2x - 13)$

6.  $4(2m + 6) + 3(3 + 5m)$

7.  $3m + 2(5 - 4m) + 5m$

**Multiply expressions:**

**a. Multiply the numbers in front of the variables**

**b. Add the exponents**

**1.  $4x^3 \cdot -6x^5$**

**2.  $9x \cdot -2x^4$**

**3.  $5m^2 \cdot m$**

**4.  $x \cdot x$**