



### Topic 3: Algebraic Expressions

**Questions 1 – 10** Simplify the expression.

1.  $5x + x$
2.  $x + 0.9x$
3.  $(-8t^3)(2t^7)$
4.  $4k \cdot k^6 - k^5 \cdot k^2$
5.  $\frac{1}{6}(-24xy)$
6.  $(5 - 3x) - (6x + 7)$
7.  $(9x + 8) + 2(5x - 1)$
8.  $5b^6 - (7 - 3b^6)$
9.  $\frac{-15 + 12m}{3}$
10.  $\frac{16x - 24x^2}{8x}$

**Questions 11 – 18** Determine the product, combining like terms as needed.

11.  $x^{10}(x^3 - x^3)$
12.  $\frac{1}{4}(8n + 48)$
13.  $-5m(10 - m)$
14.  $(3 - t)(8 - t)$
15.  $(7x - 9)(x + 2)$
16.  $(w + 11)^2$
17.  $(y - 4g)^2$
18.  $(n - 6)(n + 6)$