8th Grade Chapter 3 Test Review

November 4, 2025

1. Expand and simplify the following expressions:

   (a) $(a + 4)(a + 5)$

   (b) $(b - 1)(b + 6)$

   (c) $(x^2 + 2x + 2)(x - 3)$

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

   (e) $(x + 2)(x + 3) - (x + 1)(x + 4)$

2. Expand and simplify the following expressions:

   (a) $(a + 7)^2$

   (b) $(3a - 5)^2$

   (c) $(b - 5)(b + 5)$

   (d) $(2a + 3b)(2a - 3b)$

   (e) $(x + 2)^2 - (x - 2)^2$

3. Factor the following expressions:

   (a) $a^2 + 8a + 16$

   (b) $b^2 - 18b + 81$

   (c) $x^2 - 16$

   (d) $25a^2 - 49$

   (e) $100t^2 - 140t + 49$