

Factor each polynomial, if possible. If the trinomial cannot be factored, write *prime*.

1) $50g^2 + 40g + 8$

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

3) $4a^2 - 36b^2$

4) $24x^3 - 78x^2 + 45x$

5) $45c^2 - 32cd$

6) $x^2y^2 - y^2 - z^2 + x^2z^2$

7) $90g - 27g^2 - 75$

8) $25a^2 - 120ab + 144b^2$

Solve each equation. Check your solutions.

9) $49a^2 + 16 = 56a$

10) $25a^2 + 20a + 4 = 0$

11) $3x^2 = -24x - 48$

12) $9y^2 = 6y - 1$