

FACTORIZING TRINOMIALS $x^2 + bx + c$

1. Factor the following trinomials.

a) $x^2 + 6x + 8$

b) $x^2 - 1x - 6$

c) $x^2 + 3x - 4$

d) $x^2 - 3x + 2$

e) $x^2 + 9x + 20$

f) $x^2 - 7x + 12$

g) $x^2 + 12x + 36$

h) $x^2 + 7x - 30$

i) $x^2 - 12x + 27$

2. Is $(x + 9)(x + 4)$ the factored form of the trinomial $x^2 - 13x + 36$? Explain.

3. Ryan says the factors of the trinomial $x^2 - 10x - 24$ are $(x - 6)(x - 4)$. Is Ryan correct? Explain and make corrections if necessary.

4. Factor completely. **Remember to common factor first.**

a) $3x^2 + 21x + 30$

b) $4x^2 - 12x - 72$

c) $-x^2 + 4x - 3$

d) $2x^2 + 4x + 2$

5. A rectangular driveway has an area represented by the expression $x^2 - 3x - 10$.

- a) Determine the dimensions of the driveway. b) If $x = 15$ feet determine the actual dimensions

6. Identify which factoring methods you use to factor the following.

You do not need to solve. Note: There may be more than one method

(Methods: CF - common factoring, DSF - difference of squares factoring, or TF - trinomial factoring)

a) $16x^2 - 81$

b) $3x + 12$

c) $x^2 - 4x - 21$

d) $4x^2 + 12$

e) $4x^2 + 36x + 80$

f) $3x^2 - 27$