

1. Factor each of the following by removing the GCF:

a) $8x^2 - 12x$

b) $14x^3y^2 - 7x^2y^4 + 21x^4y^3$

2. Expand and simplify:

a) $(x + 4)(x + 2)$

b) $(x - 5)(x + 7)$

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

d) $(3x - 4)(2x - 1)$

3. Factor:

a) $x^2 + 8x + 15$

b) $x^2 - 11x + 30$

c) $x^2 - x - 12$

d) $x^2 - 7x + 6$

4. Factor using the method of decomposition:

a) $3x^2 + 7x + 2$

b) $10x^2 + 17x + 3$

b) $8x^2 - 5x - 3$

d) $7x^2 + x - 8$

5. Factor completely:

a) $2x^2 + 2x - 60$

b) $15x^2 - 65x + 20$

c) $abc^2 + 7abc + 10ab$

6. Look at the following questions and answers, and write a sentence explaining what the mistake is and how you would do the question correctly.

1. Question: Expand $(2x - 1)(x + 5)$

Answer: $2x(x + 5) - 1(x + 5) = 2x^2 + 10x - x + 5 = 2x^2 + 9x + 5$

Mistake: _____

2. Question: Factor $x^2 - 5x + 6$

Answer: $(x - 6)(x + 1)$

Mistake: _____

3. Question: Factor $2x^2 - 6x - 8$

Answer: $(2x - 4)(2x - 2)$

Mistake: _____