

Math 1201 SAMPLE Test

Unit 4: Factors and Products

Part A: Multiple Choice: Place the correct answer on the line provided. (10 Marks)

_____ 1. Factor $8x^2 - 12x$:

- A). $2(4x^2 - 6x)$ B). $2x(4x - 6)$ C). $4(2x^2 - 6x)$ D). $4x(2x - 3)$

_____ 2. Factor: $x^2 - 4x - 12$

- A). $(x - 2)(x + 6)$ B). $(x + 2)(x - 6)$ C). $(x - 3)(x + 4)$ D). $(x + 3)(x - 4)$

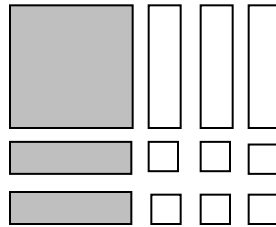
_____ 3. What product is illustrated by the following tiles?

A). $(x + 3)(x + 2)$

B). $(x - 3)(x + 2)$

C). $(x + 3)(x - 2)$

D). $(x + 3)(x - 2)$



_____ 4. Which of the following is a perfect square trinomial?

- A). $6x^2 + 6x + 6$ B). $4x^2 + 10x + 9$ C). $9x^2 + 12x + 4$ D). $10x^2 + 16x + 25$

_____ 5. Factor $25 - 4x^2$

- A). $(2x - 5)(2x - 5)$ B). $(2x + 5)(2x + 5)$ C). $(5 - 2x)(5 - 2x)$ D). $(5 - 2x)(5 + 2x)$

_____ 6. Multiply $(x - 4)(x + 7)$

- A). $x^2 + 3x - 28$ B). $x^2 + 3x + 3$ C). $x^2 - 11x - 28$ D). $x^2 - 11x + 3$

_____ 7. What is the conjugate of $(x - 2)$?

- A). $(-x - 2)$ B). $(-x + 2)$ C). $(x - 2)$ D). $(x + 2)$

_____ 8. What are the dimensions of the rectangle?

$2x^2$	$6x$
$5x$	15

- A). $(2x + 3)(x + 5)$
- B). $(2x + 5)(x + 3)$
- C). $(2x^2 + 6x)(5x + 15)$
- D). $(2x^2 + 6x)(2x^2 + 5x)$

_____ 9. Multiply: $(x - 4)^2$

- A). $x^2 + 16$
- B). $x^2 - 16$
- C). $x^2 + 8x + 16$
- D). $x^2 - 8x + 16$

_____ 10. What is the GCF of $9p^4q^2 - 6p^3q^3 + 12p^2q^4$?

- A). 3
- B). $3pq$
- C). $3p^2q^2$
- D). $3p^4q^4$

Part B: Answer all questions in the space provided. Show all necessary workings.

1. Multiply. (6 Marks)

- A). $4(x - 1)(x + 3)$
- B). $(2x - 3)(x^2 - 5x + 7)$

2. Factor. (6 Marks)

A). $12x^3y - 20xy^2 + 16x^2y^2$

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

C). $x^2 + 16y^2$

3. Factor. (6 Marks)

A). $4x^2 - 4x - 24$

B). $3x^2 + 16x - 12$

4. Determine the area of the shaded region. (4 Marks)

