Name: _____

CC Algebra

Factoring QUIZ REVIEW

1) Factored, the expression $16x^2 - 25y^2$ is equivalent to

A) $(4x - 5y)(4x + 5y)$
B) $(8x - 5y)(8x - 5y)$
C) $(8x - 5y)(8x + 5y)$
D) $(4x - 5y)(4x - 5y)$

2) If $3x$ is one factor of $3x^2 - 9x$, what is the other factor?

A) $x - 3$
B) $x + 3$
C) $3x$
D) $x^2 - 6x$

3) If Ann correctly factors an expression that is the difference of two perfect squares, her factors could be

A) $(2y - 5)(y - 5)$
B) $(2x + 3y)(2x - 3y)$
C) $(2x + y)(x - 2y)$
D) $(x - 4)(x - 4)$

4) When factored completely, $3x^2 + 7x - 20$ is equivalent to

A) $(3x - 5)(x + 4)$
B) $(3x + 5)(x - 4)$
C) $(3x - 4)(x + 5)$
D) $(3x + 4)(x - 5)$

5) When factored completely, $y^3 - 4y$ is equivalent to

A) $(y^2 + 1)(y - 4)$
B) $y(y + 4)(y - 4)$
C) $y(y + 2)(y - 2)$
D) $y(y - 2)(y - 2)$

6) What are the factors of the expression $x^2 + x - 20$?

A) $(x - 5)$ and $(x + 4)$
B) $(x + 5)$ and $(x + 4)$
C) $(x - 5)$ and $(x - 4)$
D) $(x + 5)$ and $(x - 4)$

7) What is the expression $2x^2 + 10x - 12$ when factored completely?

A) $2(x - 6)(x + 1)$
B) $2(x + 6)(x - 1)$
C) $2(x + 2)(x + 3)$
D) $2(x - 2)(x - 3)$

8) If the expression $2x^2 + 7x - 4$ represents the area of a rectangle, which expression represents its dimensions in terms of x?

A) $(2x + 1)(x - 4)$
B) $(x - 1)(2x + 4)$
C) $(2x - 4)(x - 1)$
D) $(2x - 1)(x + 4)$

9) Factor: $121 - x^2$

10) Factor: $5x + 10$

11) Factor: $9a^2 - 25b^2$

12) Factor: $3x^2 + 7x + 2$

13) What are the factors of the polynomial $16x^2 - 24x$?

14) Factor: $4y^2 - 9y + 2$

15) Factor: $17x^2y - 34xy$

16) Factor: $6b^2 - b - 12$

17) Factor: $x^2 - 2x - 3$

18) What are the factors of the polynomial $21m^3n^2 - 14m^2n$?

19) Factor completely: $3x^2 - 15x - 42$

20) Factor completely: $x^3 - 6x^2 - 7x$

Questions 21 and 22 refer to the following:

Factor the given polynomial completely:

21) $m^4 + 7m^2 - 44$

Answer: _____

22) $r^4 - 4r^2 - 45$

Answer: _____

23) Factor completely: $2y^3 - 32y$

24) Factor completely: $4x^2 - 4x - 24$

25) Factor completely: $18x^2 + 3x - 3$

26) The trinomial $4x^2 - 12x + 9$ represents the area of a square. Express the measure of a side in terms of x.

1) A 2) A 3) B 4) A 5) C

6) D 7) B 8) D

9) $(11 - x)(11 + x)$

10) $5(x + 2)$

11) $(3a - 5b)(3a + 5b)$

12) $(3x + 1)(x + 2)$

13) $8x(2x - 3)$

14) $(4y - 1)(y - 2)$

15) $17xy(x - 2)$

16) $(3b + 4)(2b - 3)$

17) $(x - 3)(x + 1)$

18) $7m^2n(3mn - 2)$

19) $3(x + 2)(x - 7)$

20) $x(x + 1)(x - 7)$

21) $(m^2 + 11)(m + 2)(m - 2)$

22) $(r^2 + 5)(r + 3)(r - 3)$

23) $2y(y + 4)(y - 4)$

24) $4(x + 2)(x - 3)$

25) $3(3x - 1)(2x + 1)$

26) $2x - 3$