Name: _____
Math 8

Review for Unit 8 Polynomial Operations Test

1) The expression $(x^2 - 5x - 2) - (-6x^2 - 7x - 3)$ is equivalent to

A) $7x^2 + 2x + 1$
B) $7x^2 - 12x - 5$
C) $7x^2 + 2x - 5$
D) $7x^2 - 2x + 1$

2) If $2x^2 - 4x + 6$ is subtracted from $5x^2 + 8x - 2$, the difference is _____.

A) $-3x^2 - 12x + 8$
B) $-3x^2 + 4x + 4$
C) $3x^2 + 4x + 4$
D) $3x^2 + 12x - 8$

3) When $6y^6 - 18y^3 - 12y^2$ is divided by $-3y^2$, the quotient is _____.

A) $-2y^3 - 6y^2 - 4y$
B) $-2y^4 + 6y + 4$
C) $3y^4 + 6y + 4$
D) $2y^4 - 6y^2 - 4y$

4) The sum of $3x^2 + x - 7$ and $x^2 + 10$ can be expressed as

A) $4x^2 + x + 3$
B) $3x^2 + x + 3$
C) $4x^4 + x - 3$
D) $3x^4 + x - 3$

5) The expression $3x^3y \bullet (-3x^2y^3)$ is equivalent to _____.

A) $9x^5y^4$
B) $-6x^5y^4$
C) $-9x^6y^3$
D) $-9x^5y^4$

6) The expression $(x - 6)^2$ is equivalent to _____.

A) $x^2 - 36$
B) $x^2 + 12x + 36$
C) $x^2 - 12x + 36$
D) $x^2 + 36$

Questions 7 through 9 refer to the following:

Find the quotient for the given expression.

7) $\dfrac{16x^2 + 4x}{4x}$

8) $\dfrac{3y^3 - 27y^2 - 81y}{3y}$

9) $\dfrac{24x^3y^2 - 18xy^2}{-6xy}$

Questions 10 through 14 refer to the following:

Find the product of the given expression.

10) $3x^2y \bullet 9x^3y^3 =$

11) $7y^2(3y + 4) =$

12) $4xy(3xy - 1) =$

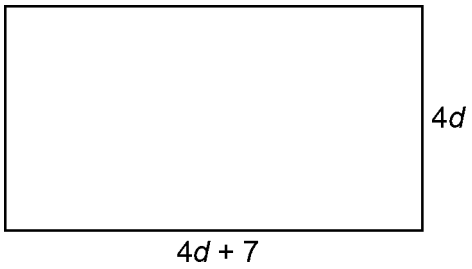
13) $(x + 5)(x + 6) =$

14) $(5x - 1)(2x + 3) =$

15) Expand and simplify the given polynomials:

$(2p - 1)^2$

16) Find the area of the rectangle. [***Show all your work***.] [***Put your answer in simplest form***.]



Answer: _____

Questions 17 and 18 refer to the following:

Expand and simplify the given polynomials:

17) $(5x + y)(2x - y)$

18) $(x - 2)(x^2 - 2x + 6)$

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

6) C

7) $4x + 1$

8) $y^2 - 9y - 27$

9) $-4x^2y + 3y$

10) $27x^5y^4$

11) $21y^3 + 28y^2$

12) $12x^2y^2 - 4xy$

13) $x^2 + 11x + 30$

14) $10x^2 + 13x - 3$

15) $4p^2 - 4p + 1$

16) $16d^2 + 28d$ OR $4d(4d + 7)$

17) $10x^2 - 3xy - y^2$

18) $x^3 - 4x^2 + 10x - 12$