



Name _____

Date _____

Review #3

Multiply and simplify.

1) $(mn^7)(m^5n^4)$

Divide and simplify.

2) $\frac{z^{-9}}{z^{-3}}$

Simplify.

3) $\left(\frac{x^3}{y^3z^4}\right)^4$

Convert to decimal notation.

4) 4.0942×10^5

Multiply or divide and write scientific notation for the result.

5) $(6 \times 10^9)(9 \times 10^7)$

6) $\frac{25 \times 10^{-4}}{5 \times 10^8}$

Evaluate the polynomial.

7) $-2x^2 - 2x - 6$, when $x = 2$

Add.

8) $(3 + 9x^5 + 9x^2) + (2x^5 - 4x^2 + 8)$

Subtract.

9) $(3x^7 + 18x^4 - 14) - (20x^4 + 8x^7 - 7)$

Multiply.

10) $(x - 3)(7x^2 + x + 9)$

11) $(4p - 11)(4p + 11)$

12) $(3x + 7)(3x + 7)$

Find the degree of the polynomial.

13) $13x^7yz - 7x^5y^2 + x^4yz^3$

Divide.

14) $\frac{21x^4 + 70x^2 - 21x}{7x}$

Factor by grouping.

15) $2x^3 - 6x^2 - 4x + 12$

Factor.

16) One of the factors of $x^2 - x - 30$ is:

A) $(x - 5)$

B) $(x + 5)$

C) $(x - 30)$

D) Prime

17) $x^2 + 5x - 24$

Factor completely.

18) $49x^2 - 25$

19) $8x^2 - 28x - 16$

Solve the problem.

20) The length of a rectangular frame is 8 cm more than the width. The area inside the frame is 84 square cm. Find the width of the frame.

Answer Key

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1) m^6n^{11}

2) $\frac{1}{z^6}$

3) $\frac{x^{12}}{y^{12}z^{16}}$

4) 409,420

5) 5.4×10^{17}

6) 5×10^{-12}

7) -18

8) $11x^5 + 5x^2 + 11$

9) $-5x^7 - 2x^4 - 7$

10) $7x^3 - 20x^2 + 6x - 27$

11) $16p^2 - 121$

12) $9x^2 + 42x + 49$

13) 9

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

15) $(x - 3)(2x^2 - 4)$

16) B

17) $(x + 8)(x - 3)$

18) $(7x + 5)(7x - 5)$

19) $4(2x + 1)(x - 4)$

20) 6 cm