

## Algebra II Homework #10

- 1) Find the equation of the line that goes through the points  $(-4,-7)$  and  $(-4,6)$ .
- 2) Solve:  $-|2x + 3| + 8 = 5$
- 3) Find the slope between the points  $(-12,8)$  and  $(12,-8)$
- 4) Solve:  $-7x - 9^0 - 18 \div 6(-2 - 1) - 3(3x - 4) = -3^2 - (4x - 1) - (-4 + 1)^3 - 6x$
- 5) Six more than the product of a number and three is nine less than twice the number. Find the number.
- 6) Simplify:  $\frac{108x^{-5}y^3a^{-6}}{96x^{-7}y^4a^{-3}}$
- 7) Simplify:  $(3x^2 - 4x + 5)(4x^2 - 3x - 2)$
- 8) Write  $629.68 \times 10^{-8}$  in scientific notation.
- 9) Simplify:  $-3(6x^2 - 7x - 3x^3 + 9) - (8x^3 - 5 - 4x^2)$
- 10) Simplify:  $6^{-2} - 4^{-3}$
- 11) Simplify:  $(17x - 19)^2$
- 12) Write  $.000000000763$  in scientific notation.
- 13) Simplify:  $-2(3x^4 - 8 + 5x^2 - 4x) - 4(5x^2 - 8x + 9x^3 - 1)$
- 14) Simplify:  $-27(-3x^{-4}y^3a^2)^{-2}(-2x^3y^{-2}a^{-1})^{-3}$
- 15) Simplify:  $(4x^2 - 7)(5x^2 - 6x + 1)$
- 16) Write  $3.24 \times 10^5$  in decimal notation.
- 17) Simplify:  $-(x^5 + 4x^2 - 8x - 7 + 6x^4) - (7x^4 - 15 - x^3 - 6x^5 + 2x)$
- 18) Simplify:  $\frac{6^{-2}x^3a^{-1}}{4^{-2}y^{-2}} \left( \frac{8x^6y^{-3}a^2}{3x^4y^{-5}a^4} \right)^{-2}$
- 19) Simplify:  $(3x - 4)^3$
- 20) Write  $.563 \times 10^9$  in scientific notation.

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