

Algebra II Homework #13

- 1) Factor: $288x^3 - 432x^2 + 162x$
- 2) Write 2754.9×10^8 in scientific notation.
- 3) Factor: $16x^4 - 2x$
- 4) Simplify: $2^{-3} - 3^{-2}$
- 5) Factor: $90x^2 + 45xa - 36x - 18a$
- 6) Solve: $16x^2 + 34x = 15$
- 7) Solve: $3x^2 = 5x + 4$
- 8) Simplify: $\frac{x^2 + x - 6}{3x^2 + 5x - 12} \cdot \frac{2x^2 - 14x}{16x^2 - 4x} \cdot \frac{12x^2 - 19x + 4}{x^2 + 5x - 14}$
- 9) Solve: $3x^3 - 39x^2 = 90x$
- 10) Solve: $2x^2 - 4 = 9x$
- 11) Simplify: $\frac{x^3 + y^3}{2x^3 + 2x^2y} \div \frac{3x^3 - 3x^2y + 3xy^2}{6x^2 - 6y^2}$
- 12) Solve: $6x^2 + 3x = 5$
- 13) Solve: $(2x - 1)(x + 4) = -9$
- 14) Simplify: $\frac{3x^2 + 10x - 8}{x^2 + 4x + 3} \cdot \frac{x^2 + 6x + 9}{3x^2 - 5x + 2} \div \frac{x^2 + x - 12}{x^2 - 1}$
- 15) Solve: $72x^3 - 84x^2 = 60x$
- 16) Solve: $x^2 = 17x + 30$
- 17) Simplify: $\frac{24x^2ya^3}{36x^3y^2a} \cdot \frac{48x^4y^3}{54xy^2} \div \frac{64x^2y^3a^2}{72x^3y^2a^3}$
- 18) Solve: $5x^3 = 20x$
- 19) Solve: $-7 = -3x^2 - 9x$
- 20) Simplify: $\frac{6x^2 + 6x}{3x + 6x^2 + 3x^3} \div \frac{x^2 - 1}{x^3 - 1}$

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