Math 1100: Section 1.4

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Solve the absolute value equation.

1) $|6x| = 5$

2) $|8m + 5| = 9$

3) $|t - 1| = 0$

4) $3|x - 3| = 18$

5) $2|x + 4| - 2 = 5$

Find the real solutions of the equation by factoring.

6) $2x^4 - 8x^2 = 0$

7) $x^3 + 4x^2 - 12x = 0$

8) $x^3 + 5x^2 - x - 5 = 0$

Solve.

9) $\frac{8}{y + 2} - \frac{6}{y - 2} = \frac{6}{y^2 - 4}$

10) $\frac{3x}{x - 3} - \frac{4}{x} = \frac{12}{x^2 - 3x}$

11) $\frac{x}{x - 4} - \frac{4}{x + 4} = \frac{32}{x^2 - 16}$

Solve the equation.

12) $\sqrt{x + 3} = 9$

13) $\sqrt{9x + 36} = x$

14) $x - \sqrt{3x - 2} = 4$

Solve.

15) $\sqrt[3]{3x + 4} = -1$

16) $\frac{1}{Q} = \frac{1}{T_1} + \frac{1}{T_2}$, for T_2

Solve the equation by making an appropriate substitution.

17) $x^4 - 7x^2 + 12 = 0$

Solve.

18) $Z = A(1 + x)^{1/4}$, for x