Algebra 2 Equation Development 2.1

Solve, check, and graph the following equations and inequalities.

1) $4d^3 + 47 = -61$

2) $-13x + 17x = -16$

3) $163 + 6k = 53 + 17k$

4) $-201 = 3(7x - 4)$

5) $4t + 5 \geq 21$

6) $-3m - 7 < 14$

7) $12x - 7x - 16 < -56$

8) $3(-2x + 11) \leq 129$

9) $x + \frac{2}{3} = \frac{5}{3}$

10) $x - \frac{1}{4} = \frac{3}{4}$

11) $x + \frac{3}{2} = \frac{1}{3}$

12) $x - \frac{3}{4} = \frac{1}{8}$

13) $\frac{1}{4}X = \frac{1}{16}$

14) $\frac{2}{9}X = \frac{9}{2}$

15) $\frac{3}{7}X = \frac{4}{9}$

16) $\frac{3}{8}X = \frac{5}{12}$

Evaluate each expression if x = 3, y = -6, and z = -1.5

17) $|-5x|$ 18) $|-9y|$ 19) $|6z|$ 20) $|4xy|$ 21) $-|-2yz|$

Solve, check, and graph the following equations.

22) $|w| = 5$ 23) $|x + 4| = 13$ 24) $|b - 7| = -4$ 25) $3|t - 5| = 9$

Solve the following literal equations in terms of the underlined variable.

26) $\underline{a} + 5 = b$ 27) $\underline{c} + d = 12$ 28) $5\underline{f} + g = 8$ 29) $\frac{\underline{j}}{2} + k = 7$

30) $\frac{4}{5}\underline{p} = 3q$ 31) $\underline{t}v = 9$ 32) $\frac{3}{8}\underline{x}yz = w$ 33) $3\underline{a} + 2b = 5$