Linear Equations and Quadratics Review Name_____ ID: 1

Date_____ Period____

Solve each equation.

1) $1 + 7x = 6x + 7$

2) $5k + 5 = -16 + 2k$

3) $5a = -7a + a$

4) $b - 2 = -7 + 6b$

5) $-(7a + 2) = 8 - 5a$

6) $-7(a - 2) - 3a = -10 + 2a$

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

8) $\frac{7}{4} - \frac{3}{2}x = x + \frac{1}{2}$

Solve each equation by factoring.

9) $5x^2 = 42 - 29x$

10) $7x^2 - 13x = 2$

11) $5k^2 = 1 + 4k$

12) $3x^2 = 56 + 13x$

Solve each equation by taking square roots.

13) $5k^2 = 80$

14) $n^2 + 9 = 85$

Solve each equation by completing the square.

15) $a^2 + 10a - 2 = -3$

16) $3x^2 - 18x - 41 = 7$

17) $n^2 - 17n - 11 = 7$

18) $2r^2 - 2r - 15 = -3$

Solve each equation with the quadratic formula.

19) $6p^2 - 52 = -11p$

20) $9x^2 = 22 - 12x$

21) $-10x^2 = -2 - 4x$

22) $k^2 + 6 = -9k$

23) $m^2 = 130 + 3m$

Solve each equation for the indicated variable.

24) $-20a = -4w - 2v$, for a

25) $g = 16x + 16 - 3y$, for x

26) $4 + 2x = -9dr$, for x

27) $-3 - 3x = 3d + r$, for x

28) $z = \dfrac{-x - 1}{4mx}$, for x

29) $g = \dfrac{-2x + 1}{6cx}$, for x

30) $g = -3ca + 3ba$, for a

31) $ux = \dfrac{4x + 3y}{2}$, for x

Answers to (ID: 1)

1) $\{6\}$
2) $\{-7\}$
3) $\{0\}$
4) $\{1\}$
5) $\{-5\}$
6) $\{2\}$
7) $\{4\}$
8) $\left\{\frac{1}{2}\right\}$
9) $\left\{\frac{6}{5}, -7\right\}$
10) $\left\{-\frac{1}{7}, 2\right\}$
11) $\left\{-\frac{1}{5}, 1\right\}$
12) $\left\{-\frac{8}{3}, 7\right\}$
13) $\{4, -4\}$
14) $\{2\sqrt{19}, -2\sqrt{19}\}$
15) $\{-5 + 2\sqrt{6}, -5 - 2\sqrt{6}\}$
16) $\{8, -2\}$
17) $\{18, -1\}$
18) $\{3, -2\}$
19) $\left\{\frac{13}{6}, -4\right\}$
20) $\left\{\frac{-2 + \sqrt{26}}{3}, \frac{-2 - \sqrt{26}}{3}\right\}$
21) $\left\{\frac{1 - \sqrt{6}}{5}, \frac{1 + \sqrt{6}}{5}\right\}$
22) $\left\{\frac{-9 + \sqrt{57}}{2}, \frac{-9 - \sqrt{57}}{2}\right\}$
23) $\{13, -10\}$

24) $a = \frac{2w + v}{10}$
25) $x = \frac{g - 16 + 3y}{16}$
26) $x = \frac{-4 - 9dr}{2}$
27) $x = \frac{-3 - 3d - r}{3}$
28) $x = -\frac{1}{4zm + 1}$
29) $x = \frac{1}{6gc + 2}$
30) $a = -\frac{g}{3c - 3b}$
31) $x = \frac{3y}{2u - 4}$