

Algebra P4

Spring Final Review 2 of 3

Directions: Do not use a calculator. All answers must be simplified and exact.

Solve each equation for x.

34) $3x - 5 = \frac{2}{3}(x - 4)$

35) $2\sqrt{x+3} - 1 = 7$

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

37) $|2x-1| < 7$

38) $0 = 2x^2 - 4x + 1$

39) $x^3 = 11x^2 - 18x$

40) $2(x+3)^2 = 18$

41) $\sqrt{2x+8} = x$

42) $\frac{x-2}{3x} = \frac{1}{4}$

43) $x^2 = 32x$

44) $4x^2 - 16x = -15$

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

46) $\frac{1}{3}(x-1) = 2$

47) $-3|x+5| \leq -12$

48) $4x^2 - 9 = 3$

49) $5x^2 - 2x - 1 = 0$

50) $25x^2 - 100 = 0$

51) $3 + |x-3| = 8$

State the excluded value(s).

52) $\frac{3d^2 + d}{3d + 1}$

53) $\frac{x^2 + 10x + 24}{x^2 + x - 12}$

54) $\frac{c^2 - 9}{3c + 9}$

55) Find the slope of the line that contains the points:

a) (4, -1) (6, -3)

b) (-7,1) (-7,8)

Find the slope and y-intercept of each line:

56) $x - 4y = 8$

57) $x = 4$

58) $y = -2$

Find the equation of each line. Use point – slope but leave your answer in slope-intercept form ($y=mx+b$).

59) slope = -3 through the point (1, 4).

60) through the points (-5, 6) and (-2, -3)

61) parallel to $y = -2x + 1$ through (-4, -1)