AUC PreCalculus

Assignment 45.

The deadline for all homework assignments is the one specified in Archie before 11:59 pm. As discussed in class, It must be correctly uploaded in order to be graded. Show all your work and justifications.

solve the inequalities.

27. $3w^2 + w < 2(w + 2)$ $\left(-1, \frac{4}{3}\right)$

30. $d^2 \geq 6d$ $(-\infty, 0] \cup [6, \infty)$

33. $(x + 4)(x - 1)(x - 3) \geq 0$

36. $-6u(u + 1)^2(3 - u) > 0$

39. $2x^3 + 5x^2 < 8x + 20$

42. $-4x^4 + 4x^3 + 64x^2 + 80x \geq 0$

78. $\dfrac{4}{x - 3} \geq \dfrac{1}{x - 3}$ $(3, \infty)$

81. $\dfrac{3}{4 - x} \leq \dfrac{6}{1 - x}$ $(-\infty, 1) \cup (4, 7]$

84. $\dfrac{(3 - x)(4x - 1)^4}{(x + 2)^2} \leq 0$ $[3, \infty) \cup \left\{\frac{1}{4}\right\}$

79. $\dfrac{4}{x + 3} > -\dfrac{2}{x}$ $(-3, -1) \cup (0, \infty)$

82. $\dfrac{5}{2 - x} \leq \dfrac{3}{3 - x}$ $(2, 3) \cup \left[\frac{9}{2}, \infty\right)$

80. $\dfrac{2}{x - 1} > -\dfrac{4}{x}$ $\left(0, \frac{2}{3}\right) \cup (1, \infty)$

83. $\dfrac{(2 - x)(2x + 1)^2}{(x - 4)^4} \leq 0$ $[2, 4) \cup (4, \infty)$