

Algebra 3 Assignment # 3

Review Worksheet

(1) Solve for x please.

(a) $16x^2 - 40x + 25 = 0$

(e) $x^2 + 8x - 209 = 0$

(b) $24x^2 - 23x - 12 = 0$

(f) $x^{\frac{1}{2}} - 5x^{\frac{1}{4}} + 6 = 0$

(c) $x^2 + 6x - 15 = 0$

(g) $\frac{5x + 3}{2x - 1} = \frac{3x + 4}{2x + 3}$

(d) $5x^2 + 7x + 3 = 0$

(h) $(2x + 3)^2 - 2(2x + 3) - 15 = 0$

(2) Solve for x please.

(a) $48x^2 + 23x - 6 < 0$

(c) $27x^3 - 36x^2 - 3x + 4 \leq 0$

(b) $x^2 - 6x - 11 \geq 0$

(d) $\frac{(x + 5)^5(x + 1)^2}{(2x - 3)^3} \geq 0$

(3) Find all values of x for which $\sqrt{\frac{x^2 - 16}{2 - x - x^2}}$ represents a real number.

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Answers

(1) (a) $\frac{5}{4}$

(e) $-19, 11$

(b) $-\frac{3}{8}, \frac{4}{3}$

(f) $16, 81$

(c) $-3 \pm 2\sqrt{6}$

(g) $\frac{-4 \pm \sqrt{3}}{2}$

(d) $\frac{7 \pm \sqrt{11}i}{10}$

(h) $-3, 1$

(2) (a) $-\frac{2}{3} < x < \frac{3}{16}$

(c) $x \leq -\frac{1}{3}$ or $\frac{1}{3} \leq x \leq \frac{4}{3}$

(b) $x \leq 3 - 2\sqrt{5}$ or $x \geq 3 + 2\sqrt{5}$

(d) $x \leq -5$ or $x = -1$ or $x > \frac{3}{2}$

(3) $-4 \leq x < -2$ or $1 < x \leq 4$