Algebra 3 Assignment # 7
Radical Equations

Solve for x please.

(1) $\sqrt{x+3} = 2x$

(2) $\sqrt{6x + 1} = 2x + 1$

(3) $\sqrt{5x+1} + 5 = 3x$

(4) $\sqrt{2x^3 + 2} = x + 1$

(5) $\sqrt{6x + 1} = 3 - 2x$

(6) $\sqrt{2x^2 + 7} = 2x - 1$

(7) $\sqrt{x^3 - x^2 + 5} = x + 1$

(8) $\sqrt[3]{9x + 9} = x + 1$

(9) $\sqrt{x + 3} + \sqrt{5x - 1} = 4$

(10) $\sqrt{2x + 3} + \sqrt{6x + 1} = 4$

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Answers

(1) $1 \ \left(\text{reject } -\frac{3}{4}\right)$

(2) $0 \ , \ \frac{1}{2}$

(3) $3 \ (\text{ reject } \frac{8}{9})$

(4) $-1 \ , \ 1 \ , \ \frac{1}{2}$

(5) $\frac{1}{2} \ (\text{ reject } 4)$

(6) $3 \ (\text{ reject } -1)$

(7) $2 \ , \ \sqrt{2} \ \left(\text{reject } -\sqrt{2}\right)$

(8) $-4 \ , -1 \ , \ 2$

(9) $1 \ (\text{ reject } 13)$

(10) $\frac{1}{2} \ \left(\text{reject } \frac{33}{2}\right)$