

(1)[4 points] Solve for  $x$ :

$$3x^2 + 5x + 1 = 0$$

(2)[3 points] Simplify using the exponent laws:

$$\sqrt[4]{\frac{t^{1/2}\sqrt{st}}{s^{2/3}}}$$

(3)[4 points] Rationalize the numerator and simplify:

$$\frac{\sqrt{x} - 3}{x - 9}$$

(4)[4 points] Solve for  $x$

$$x^2 + 9x - 10 = 0$$