Algebra 2 Trig IB

Solve each equation.

1) $-\left|3a + 7\right| - 7 = -15$

Solve each inequality.

2) $10\left|9n + 9\right| + 10 \geq 100$

Solve each equation. Remember to check for extraneous solutions.

3) $\dfrac{2}{x - 3} = \dfrac{1}{x + 1} + \dfrac{2}{x^2 - 2x - 3}$

4) $\dfrac{1}{x - 2} - \dfrac{1}{3x^2 + 3x - 18} = \dfrac{2x - 2}{x^2 + x - 6}$

5) $8 = \sqrt{22n - 2}$

6) $\sqrt{10n} = \sqrt{9n + 1}$

Simplify.

7) $\dfrac{4 - \sqrt{3}}{4 - 2\sqrt{3}}$

8) $\dfrac{4 + 4\sqrt{5}}{2 - 3\sqrt{5}}$

Simplify each expression.

9) $\dfrac{3a}{6a + 18} + \dfrac{4}{3}$

10) $\dfrac{4}{5m^2} - \dfrac{6m}{m + 2}$