HW #2 Math 138

Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Solve the equation by factoring.

1) $12x^2 - 5x - 25 = 0$ 1) _____

A) $\{\frac{5}{4}, -\frac{5}{3}\}$ B) $\{-\frac{5}{4}, -\frac{5}{3}\}$ C) $\{-\frac{5}{4}, \frac{5}{3}\}$ D) $\{\frac{5}{4}, \frac{5}{3}\}$

2) $2x^2 - 22 = 0$ 2) _____

A) $\{-11, 11\}$ B) $\{-\sqrt{11}, \sqrt{11}\}$ C) $\{12\}$ D) $\{11\}$

Solve the equation by the Square Root Method.

3) $(2x - 1)^2 = 81$ 3) _____

A) $\{8, -10\}$ B) $\{5, -4\}$ C) $\{4, -5\}$ D) $\{10, -8\}$

4) $(x + 5)^2 = 14$ 4) _____

A) $\{-5 + \sqrt{14}, -5 - \sqrt{14}\}$ B) $\{\sqrt{14}, -\sqrt{14}\}$

C) $\{5 + \sqrt{14}, 5 - \sqrt{14}\}$ D) $\{9\}$

Solve the equation by completing the square.

5) $x^2 + 4x = 3$ 5) _____

A) $\{-2 - 2\sqrt{7}, -2 + 2\sqrt{7}\}$ B) $\{2 + \sqrt{7}\}$

C) $\{-1 - \sqrt{7}, -1 + \sqrt{7}\}$ D) $\{-2 - \sqrt{7}, -2 + \sqrt{7}\}$

6) $x^2 + 8x - 7 = 0$ 6) _____

A) $\{-1 - \sqrt{23}, -1 + \sqrt{23}\}$ B) $\{-4 - \sqrt{23}, -4 + \sqrt{23}\}$

C) $\{4 + \sqrt{23}\}$ D) $\{-4 - 2\sqrt{23}, -4 + 2\sqrt{23}\}$

Find the real solutions, if any, of the equation. Use the quadratic formula.

7) $8x^2 - x + 1 = 0$ 7) _____

A) $\{\frac{-1 - \sqrt{33}}{16}, \frac{1 + \sqrt{33}}{16}\}$ B) $\{\frac{-1 - \sqrt{33}}{16}, \frac{-1 + \sqrt{33}}{16}\}$

C) $\{\frac{-1 + \sqrt{33}}{16}, \frac{1 + \sqrt{33}}{16}\}$ D) no real solution

Use the discriminant to determine whether the quadratic equation has two unequal real solutions, a repeated real solution, or no real solution without solving the equation.

8) $x^2 - 3x - 4 = 0$ 8) _____

A) repeated real solution

B) two unequal real solutions

C) no real solution