

Homework 33.1

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Solve each equation with the quadratic formula.

1) $4n^2 - 8n - 22 = 0$

2) $3b^2 - 12b - 63 = 0$

3) $x^2 = -4x + 96$

4) $8r^2 + 1 = -11r$

Divide.

5) $(x^3 + 3x^2 + 2x) \div 9x^3$

6) $(20v^5 + 12v^4 + 4v^3) \div 4v$

Factor the common factor out of each expression.

7) $4a^6 - 24a^4 + 24a^3$

8) $-9n^5 + 90n^4 - 72n$

Answers to Homework 33.1

1) $\left\{ \frac{2 + \sqrt{26}}{2}, \frac{2 - \sqrt{26}}{2} \right\}$

2) $\{7, -3\}$

3) $\{8, -12\}$

4) $\left\{ \frac{-11 + \sqrt{89}}{16}, \frac{-11 - \sqrt{89}}{16} \right\}$

5) $\frac{1}{9} + \frac{1}{3x} + \frac{2}{9x^2}$

6) $5v^4 + 3v^3 + v^2$

7) $4a^3(a^3 - 6a + 6)$

8) $9n(-n^4 + 10n^3 - 8)$