Algebra I Worksheet #11 Unit 10 Selected Solutions

Perform the indicated division problems.

3. $8x^8 \div 2x^2 = 4x^6$

6. $(54x^3 - 72x^2 + 36x) \div (-18x) = -3x^2 + 4x - 2$

8. $(2x^3 - 3x^2 - x + 12) \div (2x + 3) = x^2 - 3x + 4$

$$
\begin{array}{r|l}
 & x^2 - 3x + 4 \\
\hline
2x + 3 & 2x^3 - 3x^2 - x + 12 \\
 & 2x^3 + 3x^2 \\
\hline
 & -6x^2 - x + 12 \\
 & -6x^2 - 9x \\
\hline
 & 8x + 12 \\
 & 8x + 12 \\
\hline
 & 0
\end{array}
$$

11. $(12x^3 - 20x^2 - 27x + 45) \div (6x^2 - x - 15) = 2x - 3$

$$
\begin{array}{r|l}
 & 2x - 3 \\
\hline
6x^2 - x - 15 & 12x^3 - 20x^2 - 27x + 45 \\
 & 12x^3 - 2x^2 - 30x \\
\hline
 & -18x^2 + 3x + 45 \\
 & -18x^2 + 3x + 45 \\
\hline
 & 0
\end{array}
$$