

Homework #20

Answers

From Houghton-Mifflin Precalculus

3rd Edition

p170:

8)
$$\begin{array}{r} 5x + 3 \\ \times - 4 \end{array} \overbrace{\begin{array}{r} 5x^2 - 17x - 12 \\ 5x^2 - 20x \\ \hline 3x - 12 \\ 3x - 12 \\ \hline 0 \end{array}}$$

Ans: $5x + 3$

10)
$$\begin{array}{r} x^3 + 3x^2 + 0x - 1 \\ \times + 2 \end{array} \overbrace{\begin{array}{r} x^4 + 5x^3 + 6x^2 - x - 2 \\ x^4 + 2x^3 \\ \hline 3x^3 + 6x^2 \\ 3x^3 + 6x^2 \\ \hline -x - 2 \\ -x - 2 \end{array}}$$

Ans: $x^3 + 3x^2 - 1$

9)
$$\begin{array}{r} x^2 - 3x + 1 \\ 4x + 5 \end{array} \overbrace{\begin{array}{r} 4x^3 - 7x^2 - 11x + 5 \\ 4x^3 + 5x^2 \\ \hline - 12x^2 - 11x \\ - 12x^2 - 15x \\ \hline 4x + 5 \\ 4x + 5 \\ \hline 0 \end{array}}$$

Ans: $x^2 - 3x + 1$

13)
$$\begin{array}{r} 3x + 5 \\ 2x^2 + 1 \end{array} \overbrace{\begin{array}{r} 6x^3 + 10x^2 + x + 8 \\ 6x^3 + 0x^2 + 3x \\ \hline 10x^2 - 2x + 8 \\ 10x^2 + 0x + 5 \\ \hline -2x + 3 \end{array}}$$

Ans: $3x + 5 + \frac{-2x + 3}{2x^2 + 1}$

14)
$$\begin{array}{r} x \\ x^2 + 1 \end{array} \overbrace{\begin{array}{r} x^3 + 0x^2 + 0x - 9 \\ x^3 + 0x^3 + x \\ \hline -x - 9 \end{array}}$$

Ans: $x + \frac{-x - 9}{x^2 + 1}$