

Mr. Ward
Answer Key

pg 426

$$\begin{array}{r|rrrr} 5. & 3 & 7 & -23 & 6 \\ & & \downarrow & 21 & -6 \\ \hline & & 7 & -2 & 0 \end{array}$$
$$= 7x - 2$$

$$\begin{array}{r|rrrrr} 6. & -3 & 1 & 0 & 0 & -5 & 10 \\ & & \downarrow & -3 & 9 & -27 & 96 \\ \hline & & 1 & -3 & 9 & -32 & 106 \end{array}$$
$$= x^3 - 3x^2 + 9x - 32 + \frac{106}{x+3}$$

$$\begin{array}{r|rrrr} 7. & -7 & 1 & 1 & -42 \\ & & \downarrow & -7 & 42 \\ \hline & & 1 & -6 & 0 \end{array}$$
$$= x - 6$$

$$\begin{array}{r|rrrr} 19. & -1 & 1 & 5 & 6 \\ & & \downarrow & -1 & -4 \\ \hline & & 1 & 4 & 2 \end{array}$$
$$= x + 4 + \frac{2}{x+1}$$

$$\begin{array}{r|rrrrr} 20. & -5 & 1 & 6 & 6 & 0 & 0 \\ & & \downarrow & -5 & -5 & -5 & 25 \\ \hline & & 1 & 1 & 1 & -5 & 25 \end{array}$$
$$= x^3 + x^2 + x - 5 + \frac{25}{x+5}$$

$$\begin{array}{r|rrrr} 21. & -8 & 1 & 9 & 6 \\ & & \downarrow & -8 & -8 \\ \hline & & 1 & 1 & -2 \end{array}$$
$$= x + 1 - \frac{2}{x+8}$$

$$\begin{array}{r|rrrr} 22. & 2 & 2 & 3 & -20 \\ & & \downarrow & 4 & 14 \\ \hline & & 2 & 7 & -6 \end{array}$$
$$= 2x + 7 - \frac{6}{x-2}$$

$$\begin{array}{r|rrrr} 23. & 1/2 & 2 & 13 & -8 \\ & & \downarrow & 1 & 7 \\ \hline & & 2 & 14 & -1 \end{array}$$
$$= 2x + 14 - \frac{1}{x-1/2}$$

$$\begin{array}{r|rrrr} 24. & -1 & 4 & 5 & 1 \\ & & \downarrow & -4 & -1 \\ \hline & & 4 & 1 & 0 \end{array}$$
$$= 4x + 1$$