

Master E

Assignment

Divide.

1) $(x^3 - 2x^2 - 58x - 52) \div (x - 9)$

2) $(n^3 + 23n^2 + 131n) \div (n + 12)$

3) $(x^5 + 15x^4 + 60x^3 + 24x^2 - 61x + 61) \div (x + 6)$

$$\begin{array}{r|rrrrrr} 7 & -10 & 1 & 10 & 0 & -7 & -73 & -21 \\ & & \downarrow & -10 & 0 & 0 & 70 & 36 \\ \hline & & & 1 & 0 & 0 & -7 & -3 & 9 \end{array}$$

4) $(p^5 - 19p^4 + 95p^3 - 86p^2 + 108p - 111) \div (p - 11)$

5) $(x^4 - 7x^3 + 2x - 22) \div (x - 7)$

6) $(x^4 - 7x^3 - 9x + 65) \div (x - 7)$

$$a^4 - 7a - 3 + \frac{9}{a+10}$$

7) $(a^5 + 10a^4 - 7a^2 - 73a - 21) \div (a + 10)$

$$\begin{array}{r|rrrr} 9 & 1 & -2 & -58 & -52 \\ & \downarrow & 9 & 63 & 45 \\ \hline & & 1 & 7 & 5 & -7 \end{array}$$

$$x^2 + 7x + 5 - \frac{7}{x-9}$$

$$\begin{array}{r|rrrr} -12 & 1 & 23 & 131 & 0 \\ & \downarrow & -12 & -132 & 12 \\ \hline & & 1 & 11 & -1 & 12 \end{array}$$

$$n^2 + 11n - 1 + \frac{12}{n+12}$$

$$\begin{array}{r|rrrrrr} -6 & 1 & 15 & 60 & 24 & -61 & 61 \\ & \downarrow & -6 & -54 & -36 & 72 & -66 \\ \hline & & 1 & 9 & 6 & -12 & 11 & -5 \end{array}$$

$$x^4 + 9x^3 + 6x^2 - 12x + 11 - \frac{5}{x+6}$$

$$\begin{array}{r|rrrrrrr} 11 & 1 & -19 & 95 & -86 & 108 & -111 \\ & \downarrow & 11 & -88 & 77 & -99 & 99 \\ \hline & & 1 & -8 & 7 & -9 & 9 & -12 \end{array}$$

$$p^4 - 8p^3 + 7p^2 - 9p + 9 - \frac{12}{p-11}$$

$$\begin{array}{r|rrrr} 7 & 1 & -7 & 0 & 2 & -22 \\ & \downarrow & 7 & 0 & 0 & 14 \\ \hline & & 1 & 0 & 0 & 2 & -8 \end{array}$$

$$x^3 + 2 - \frac{8}{x-7}$$

$$\begin{array}{r|rrrr} 7 & 1 & -7 & 0 & -9 & 65 \\ & \downarrow & 7 & 0 & 0 & -63 \\ \hline & & 1 & 0 & 0 & -9 & 2 \end{array}$$

$$x^3 - 9 + \frac{2}{x-7}$$

7) at the top