6.1 Polynomial Operations

1. $5x^5 + 4x^4$ ← biggest exponent

quintic binomial

2. $9x^4$ ← biggest exponent

quartic Monomial

7. $(5n^4 + 2n^2 - 5n^3) + (4n^2 - 2n^3)$

$5n^4 + 6n^2 - 7n^3$

$5n^4 - 7n^3 + 6n^2$

13. $(k^3 + 5 + k) + (5 + 5k + k^3)$

$2k^3 + 6k$

17. $(-7n^2 + 3n + 7)(5n - 2)$

$$\begin{array}{r} -7n^2 + 3n + 7 \\ \times \quad 5n - 2 \\ \hline 14n^2 - 6n - 14 \\ +\ -35n^3 + 15n^2 + 35n + 0 \\ \hline -35n^3 + 29n^2 + 29n - 14 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1} \\ 125 \\ \times \quad 3 \\ \hline 375 \end{array} \qquad \begin{array}{r} 125 \\ \times \quad 13 \\ \hline 375 \\ 1250 \end{array}$$

Other Valid Method(s)

$(5n-2)(-7n^2+3n+7)$

	$-7n^2$	$3n$	7
$5n$			
-2			

19. $(32v^3 + 4v^2 + 8v) \div 8v^2$

$$\frac{32v^3}{8v^2} + \frac{4v^2}{8v^2} + \frac{8v}{8v^2}$$

$$\frac{v}{v \cdot v}$$

$$4v + \frac{1}{2} + \frac{1}{v}$$