

Name : _____

Adding Polynomials

Multi-variable: L2S4

Arrange and add the polynomials.

1) $z + y^2 - \frac{1}{4}x^3y^3 - \frac{3}{7}y$, $-3y^2 - \frac{2}{3}x^3y^3 - \frac{2}{7}y - z - 9$ 2) $\frac{1}{7}b^4c + \frac{3}{4} + \frac{8}{9}bc^3$, $-\frac{4}{9}bc^3 - \frac{1}{7}b^4c - \frac{3}{4}$

3) $n^5 + 4n^2 - n + n^4 + m$

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r , $\frac{1}{3}p^2q + 8 + 7qr + 3pq$

5) $\frac{1}{7}w^5 + \frac{4}{7}u^6 + \frac{2}{7}u + \frac{6}{7}$

$t + 2r^4s - 3st^3 + rst - 4r^3$

7) $abc^4 - a^4 - \frac{5}{6}d^5 - c^3$, $-\frac{3}{5}c^3 - \frac{1}{2} - \frac{2}{5}abc^4 - \frac{1}{4}a^4$ 8) $-\frac{3}{8}g^2h + 9 - \frac{4}{5}g^2 + \frac{2}{9}k$, $\frac{3}{5}g^2 - 9 + \frac{3}{8}g^2h$

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Answer key

Adding Polynomials

Multi-variable: L2S4

Arrange and add the polynomials.

1) $z + y^2 - \frac{1}{4}x^3y^3 - \frac{3}{7}y$, $-3y^2 - \frac{2}{3}x^3y^3 - \frac{2}{7}y - z - 9$

$$\begin{array}{r} -\frac{1}{4}x^3y^3 + y^2 - \frac{3}{7}y + z \\ (+) -\frac{2}{3}x^3y^3 - 3y^2 - \frac{2}{7}y - z - 9 \\ \hline -\frac{11}{12}x^3y^3 - 2y^2 - \frac{5}{7}y - 9 \end{array}$$

2) $\frac{1}{7}b^4c + \frac{3}{4} + \frac{8}{9}bc^3$, $-\frac{4}{9}bc^3 - \frac{1}{7}b^4c - \frac{3}{4}$

$$\begin{array}{r} \frac{1}{7}b^4c + \frac{8}{9}bc^3 + \frac{3}{4} \\ (+) -\frac{1}{7}b^4c - \frac{4}{9}bc^3 - \frac{3}{4} \\ \hline \frac{4}{9}bc^3 \end{array}$$

3) $n^5 + 4n^2 - n + n^4 + m$

$$\begin{array}{r} n^5 + n^4 + \\ (+) \frac{1}{2}n^5 - \frac{1}{6}n^4 + \\ \hline \frac{3}{2}n^5 + \frac{5}{6}n^4 + \end{array}$$

5) $\frac{1}{7}w^5 + \frac{4}{7}u^6 + \frac{2}{7}u + \frac{6}{7}$

$$\begin{array}{r} \frac{4}{7}u^6 + \frac{1}{7}w^5 + \\ (+) \frac{3}{7}u^6 \\ \hline u^6 + \frac{1}{7}w^5 + \end{array}$$

7) $abc^4 - a^4 - \frac{5}{6}d^5 - c^3$, $-\frac{3}{5}c^3 - \frac{1}{2} - \frac{2}{5}abc^4 - \frac{1}{4}a^4$

$$\begin{array}{r} abc^4 - \frac{5}{6}d^5 - a^4 - c^3 \\ (+) -\frac{2}{5}abc^4 - \frac{1}{4}a^4 - \frac{3}{5}c^3 - \frac{1}{2} \\ \hline \frac{3}{5}abc^4 - \frac{5}{6}d^5 - \frac{5}{4}a^4 - \frac{8}{5}c^3 - \frac{1}{2} \end{array}$$

8) $-\frac{3}{8}g^2h + 9 - \frac{4}{5}g^2 + \frac{2}{9}k$, $\frac{3}{5}g^2 - 9 + \frac{3}{8}g^2h$

$$\begin{array}{r} -\frac{3}{8}g^2h - \frac{4}{5}g^2 + \frac{2}{9}k + 9 \\ (+) \frac{3}{8}g^2h + \frac{3}{5}g^2 - 9 \\ \hline -\frac{1}{5}g^2 + \frac{2}{9}k \end{array}$$

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r , $\frac{1}{3}p^2q + 8 + 7qr + 3pq$

$5pq - 7qr$

$3pq + 7qr + 8$

$3pq + 8$

$t + 2r^4s - 3st^3 + rst - 4r^3$

$r^4 + 4r^3$

$r^4 - 3st^3 - 4r^3 + rst$

$r^4 - 3st^3 + rst$