

NAME \_\_\_\_\_

**Module 11** Simplifying Algebraic Expressions  
with Polynomials  
**Lesson 3** Adding and Subtracting Polynomials

**additional  
practice**

Find each sum or difference either horizontally or vertically. Write answers in simplest form.

1.  $(3y + 2) + (5y - 6)$

$8y - 4$

2.  $(4m - 2) - (m + 2)$

$3m - 4$

3.  $(b^2 + 2b + 3) - (-b^2 - 2b - 3)$

$2b^2 + 4b + 6$

4.  $(d^5 + 7) + (d^3 + 1)$

$d^5 + d^3 + 8$

5.  $(2k^2 - 15k + 3) - (-12k^2 + 4k - 1)$

$14k^2 - 19k + 4$

6.  $(3m^2 + 4m - 1) + (5m^2 - 4m + 1)$

$8m^2$

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

$-7x^2 - 7x + 2$

8.  $(7p + 3) - (5p^2 + 2p - 1)$

$-5p^2 + 5p + 4$

9.  $(5r^5 + 2r^3 - 9r) + (-9r^4 - 5r^2 + 6)$

$5r^5 - 9r^4 + 2r^3 - 5r^2 - 9r + 6$

10.  $(8t^2 + 7t - 1) + (15t^2 - 5t + 6)$

$23t^2 + 2t + 5$

11. 
$$\begin{array}{r} -9p^5r^3 + 5pr^3 \quad + 12p^5 \\ + 5p^5r^3 - 6pr^3 + 8p^4 \end{array}$$

$-4p^5r^3 - pr^3 + 8p^4 + 12p^5$

12. 
$$\begin{array}{r} 5ab^2 + 4a^2b \\ - (12ab^2 - 5a^2b - 3) \end{array}$$

$-7ab^2 + 9a^2b + 3$

13. 
$$\begin{array}{r} -x^2y^2 + 5x^2y - 9xy^2 \\ + 7x^2y^2 + 2x^2y - 3xy^2 \end{array}$$

$6x^2y^2 + 7x^2y - 12xy^2$

14. 
$$\begin{array}{r} 4g^2h^2 - 5gh + 9 \\ - (-2g^2h^2 + 3gh - 5) \end{array}$$

$6g^2h^2 - 8gh + 14$

15.  $(-9r^2 + 12rs + 5s^2) + (20r^2 - 3rs - 12s^2)$   $11r^2 + 9rs - 7s^2$

16.  $(6x^2 - 13xy + 2y^2) - (8x^2 + 4xy - 5y^2)$   $-2x^2 - 17xy + 7y^2$

17.  $(12x - 9y) - (14xy + 3x - 9)$   $9x - 14xy - 9y + 9$

18.  $(6k^4m^3 - 5k^3m^4 + 12k^2m^2) + (-9k^2m^2 - 2k^3m^4)$   $6k^4m^3 - 7k^3m^4 + 3k^2m^2$

19.  $\left(\frac{3}{4}x^2 - \frac{1}{2}xy + \frac{2}{3}y^2\right) + \left(\frac{2}{5}x^2 - \frac{3}{4}xy - \frac{1}{4}y^2\right)$   $\frac{23}{20}x^2 - \frac{5}{4}xy + \frac{5}{12}y^2$

20.  $(-5.7r^2 - 0.12rs + 3.6s^2) - (-2.4r^2 + 0.13rs - 4.7s^2)$   $-3.3r^2 - 0.25rs + 8.3s^2$

