

Algebra I

11.1 Worksheet #2

Adding and Subtracting Polynomials

NAME: _____

DATE: _____ HOUR: _____

Which pairs of monomials are *like terms*? Circle (there are nine).

$3m^2n, -7m^2n$

$-16st^2, 5st^2$

$8mn^2, -12m^2n$

$12st^2, -24s^2t$

$-9, 16$

$-2, 32$

$18x, 14y$

$7r, -13s$

$3xyz, -8xyz$

$-4abc, -11abc$

$x^4, \sqrt{5}x^4$

$-\sqrt{3}y^3, y^3$

$-7x^2, 3x^4$

$-10y^4, 8y^2$

$9rs^2t^2, 12rs^2t^2$

Simplify these polynomials by *adding like terms*:

1. $(3x + 2) + (4x - 7)$

2. $(6k - 3) + (5k + 2)$

3. $(5y + 9) + (6y - 11)$

4. $(11s + 7) + (4s + 4)$

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

6. $(y^2 - 3y + 9) + (y^2 - 12y + 2)$

7. $(2x - 2y + 3z) + (5x - 6y - 12z)$

8. $(4a - 6b + 2c) + (3a + 2b - 4c)$

Simplify these polynomials by *subtracting like terms*: Show the steps for subtraction.

9. $(-2m - 2) - (6m + 4)$

10. $(17x + 2) - (12x - 9)$

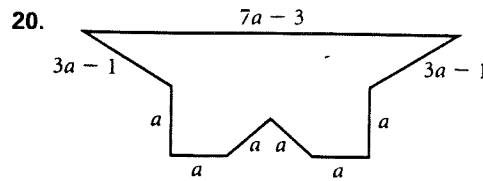
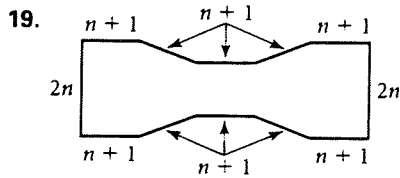
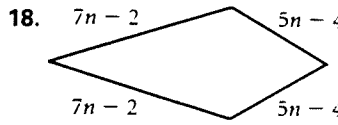
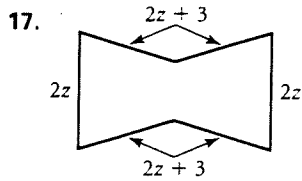
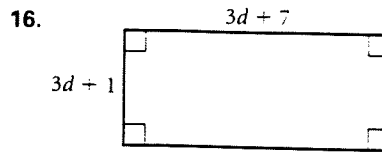
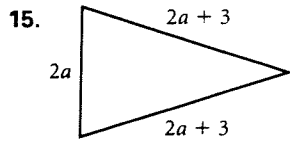
11. $(-8n - 8) - (2n - 3)$

12. $(-6y + 7) - (6y + 3)$

13. $(9s - 12) - (-9s - 12)$

14. $(4t - 2) - (4t - 2)$

Write a polynomial expression in standard form for each perimeter.



In 1-8, simplify.

1. $(h - 3) + (2h + 6)$

2. $(3h^2 + 7h - 6) + (4h - 9)$

3. $(16 - 7x^2) + (9 - 4x + 2x^2)$

4. $(4t - 9) - (3t + 8)$

5. $(9r - 7) - (3r - 4) - (r - 6)$

6. $(11 - 5w^2) - (18 - 8w^2)$

7. $(10k^2 - 5k + 32) - (2k^2 - 3k + 6)$

8. $(4y^4 + 6y^3 - 5y^2 - 11y) + (y^4 - y^3 + 12y)$

9. True or false $7xy$ is a trinomial.

Write each polynomial in standard form.

1. $-2b + 5 + b^2 - 3b^3$

2. $-5z^5 + 3z^3 - 3z^2 + 7$

3. $8 - 2r^3 + r^5 - 3r^2$

4. $-w^3 - 2w^6 + w^2 - w$

5. $5s^2 - 3s + 3 - s^7$

6. $-2x^3 - 5 + x - 2x^7$