

Algebra 1
3.3 Worksheet
Adding Expressions

Name: _____

Date: _____ Hour: _____

Definition:
Like terms

Like terms are terms that are exactly the same, or differ only in their numerical coefficients.

The expression $3a + 4a + 2a$ has three terms that differ only in their coefficients, 3, 4, and 2. The terms of $3a + 4a + 2a$ are *like terms*.
The expression $3b + 5a + 2$ has three terms. The terms are *unlike terms*.

Example 1 Simplify $9x + 5x + 2x$.

Example 3 Simplify $7x + 3x + x$.

Example 2 Simplify $5a + 3b + 7$, if possible.

Example 4 Simplify $7 + 8x + 9y + 6x + 3$

Part A.

Simplify, if possible.

1. $3x + 4x$

2. $5p + 8p$

3. $7x + 5$

4. $8a + 7a$

5. $4y + 7y$

6. $5a + 3b$

7. $7r + 9r$

8. $9 + 4t$

9. $3m + 9m$

10. $8x + 7x$

11. $6x + 3x$

12. $6 + 8y$

13. $8w + 5w$

14. $3b + 1b$

15. $8b + 8b$

Part B.

Simplify, if possible.

1. $7x + 4x + 5x$

2. $5x + 7x + 6x$

3. $6y + 10y + 3y$

4. $2m + 3m + 4m$

5. $4a + 7a + 8$

6. $3r + 9 + r$

7. $8 + 5z + 14$

8. $8 + 6z + 9z$

9. $6x + 2y + 8$

10. $a + 3 + 5a$

11. $3m + 4y$

12. $7y + 3 + 8y$

13. $7 + 4y + 3 + 2y$

14. $8 + 5m + 7 + m$

15. $5g + 4 + 2g + 4g + 6$

16. $5a + 6b + 9b + 3a$

17. $2c + 6d + 8c + 5d + 4$

18. $8x + 7y + 3x + 2 + 4y + 5$

irt C.

Simplify.

1. $-5y + 9y$
2. $2a - 8a$
3. $-7b + 9b$
4. $-3y + 8y$
5. $4a - 7a$
6. $-6b + 8b$
7. $-9x + 2x$
8. $-7z + 5z$
9. $-4c - 7c$
10. $-8r + 3r$
11. $-5y - 5y$
12. $2r - 2r$
13. $-7x - 3x$
14. $-7b + 9b$
15. $-4k - 7k$
16. $15c - 4c$
17. $6x - 7 - 3x$
18. $4z - 10 - 9z$
19. $-6c - 4 - 5c$
20. $-5q - 2 + 2q - 8$
21. $9x - 3 - 7x + 4$
22. $9y - 8y + 3y$
23. $2x - 3y - 5x + 4 + 8y$
24. $4a + 2b - 3 - 6a - 5b$
25. $-6r - 10s + 8r + 4s - 6$
26. $4p - 8q - 3 + 10q - 6p$
27. $-9x + 7 - 2y - 4x - 8y$
28. $3d - 7 - 6d + 5e - 8$
29. $-7a - 2y + 7 + 2y + 5a$
30. $7d + 8c + 1 - 10c - 7d - 3$

Simplify.

31. $6x - 2 + 9y - 3y - 3x$
32. $-5z + 9 - 3x - 10z + 7x$
33. $5x - 3 + 8y - 2y - 3x$
34. $-4z + 9 - 2x - 10z + 7x$
35. $-4x + 6y - 3z + 8x - 2y$
36. $-8z - 4y - 3x - 2y + 2z$
37. $-5x + 3y + 2 - 8 + 3x - 5y$
38. $-6z - 4y - 3x + 4y + 2z$
39. $-3x + 7y - 4z - 9x - 3y$
40. $-7z - 8y - 3x - 4y + 3z$
41. $-6x + 3 + 2y - 9 - 5x + 4y$
42. $-8y + 4z + 2y - 7 - 9z - 2y$
43. $-2z + 4x - 3y + 18$
44. $5z - 3x + 7y - 5z + 5x - 4y$
45. $1.4x - 6 + 0.008y - 2.3y - 0.2x$
46. $4.2 - 0.06x - 8.1z + 0.1 + 4.04z$