

ADDING LINEAR EXPRESSIONS Find the sum. (See Example 1.)

10. $(n + 8) + (n - 12)$

$$\begin{array}{r} n+8 \\ + n-12 \\ \hline 2n-4 \end{array}$$

11. $(7 - b) + (3b + 2)$

$$\begin{array}{r} 7-1b \\ + 2+3b \\ \hline 9+2b \end{array}$$

12. $(2w - 9) + (-4w - 5)$

$$-2w-14$$

13. $(2x - 6) + (4x - 12)$

$$6x-18$$

14. $(-3.4k - 7) + (3k + 21)$

$$-0.4k+14$$

15. $\left(-\frac{7}{2}z + 4\right) + \left(\frac{1}{5}z - 15\right)$

$$-3\frac{3}{10}z - 11$$

16. $(6 - 2.7h) + (-1.3j - 4)$

$$2 - 2.7h - 1.3j$$

different variables

17. $\left(\frac{7}{4}x - 5\right) + (2y - 3.5) + \left(-\frac{1}{4}x + 5\right)$

$$1\frac{1}{2}x + 2y - 3.5$$

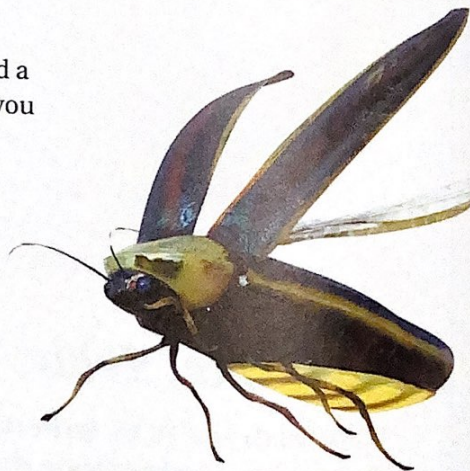


18. MODELING REAL LIFE While catching fireflies, you and a friend decide to have a competition. After m minutes, you have $(3m + 13)$ fireflies and your friend has $(4m + 6)$ fireflies.

a. How many total fireflies do you and your friend catch? Explain your reasoning.

$$(3m+13) + (4m+6)$$

$$7m+19$$



b. The competition lasts 3 minutes. Who has more fireflies? Justify your answer.

me $3(3) + 13 = 9 + 13 = 22$

I have more fireflies.

my friend $4(3) + 6 = 18$

SUBTRACTING LINEAR EXPRESSIONS Find the difference. (See Example 2.)

19. $(-2g+7) - (g+11)$

$$\begin{array}{r} -2g+7 \\ - \quad g+11 \\ \hline -3g-4 \end{array}$$

20. $(6d+5) - (2-3d)$

$$\begin{array}{r} 6d+5 \\ - \quad 2-3d \\ \hline 9d+3 \end{array}$$

21. $(4-5y) - (2y-16)$

$$\begin{array}{r} 4-5y \\ - \quad 2y-16 \\ \hline -7y+20 \end{array}$$

22. $(2n-9) - (-2.4n+4)$

$$4.4n-13$$

23. $(-\frac{1}{8}c+16) - (\frac{3}{8}+3c)$

$$2\frac{7}{8}c + 15\frac{5}{8}$$

24. $(\frac{9}{4}x+6) - (-\frac{5}{4}x-24)$

$$3\frac{1}{2}x + 30$$

25. $(\frac{1}{3}-6m) - (\frac{1}{4}n-8)$

$$8\frac{1}{3} - 6m - \frac{1}{4}n$$

26. $(1-5q) - (2.5s+8) - (0.5q+6)$

$$-13 - 5.5q - 2.5s$$

27. **B.E.S.T. Test Prep** Which expression is equivalent to $(-5.2x+8) - (3x-5)$?

- (A) $-2.2x+13$ (B) $-8.2x+13$ (C) $2.2x+3$ (D) $-8.2x+3$

$$-8.2x + 13$$

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MTR

28. **YOU BE THE TEACHER** Your friend finds the difference $(4m+9) - (2m-5)$. Is your friend correct? Explain your reasoning.

$$\begin{aligned} (4m+9) - (2m-5) &= 4m+9-2m-5 \\ &= 4m-2m+9-5 \\ &= 2m+4 \end{aligned}$$

We don't rewrite it like this but subtracting a negative would turn to additions.

$$\begin{array}{r} 4m+9 \\ - \quad 2m-5 \\ \hline 2m+14 \end{array}$$