

6 Adding and Subtracting Decimals

To add or subtract decimals, write the numbers in a column and line up the decimal points. In some cases, you may want to *annex*, or place zeros at the end of the decimals, to help align the columns. Then add or subtract as with whole numbers and bring down the decimal point. Always estimate first to see whether your answer is reasonable.

EXAMPLES Add and Subtract Decimals

Find each sum or difference.

1 $12.6 + 4.5$ **Estimate** $13 + 5 = 18$

$$\begin{array}{r} 12.6 \\ + 4.5 \\ \hline 17.1 \end{array}$$

Line up the decimal points.
Add.
The sum is close to the estimate.

2 $42.17 - 15.85$ **Estimate** $42 - 16 = 26$

$$\begin{array}{r} 42.17 \\ - 15.85 \\ \hline 26.32 \end{array}$$

Line up the decimal points.
Subtract.
The difference is close to the estimate.

3 $57.125 + 7.63$ **Estimate** $57 + 8 = 65$

$$\begin{array}{r} 57.125 \\ + 7.630 \\ \hline 64.755 \end{array}$$

Annex a zero to align the columns.
Compare to the estimate.

4 $25 - 15.25$ **Estimate** $25 - 15 = 10$

$$\begin{array}{r} 25.00 \\ - 15.25 \\ \hline 9.75 \end{array}$$

Annex two zeros to align the columns.
Compare to the estimate.

Exercises

Find each sum or difference.

- | | | | | |
|---|--|---|---|--|
| 1. $\begin{array}{r} 0.132 \\ - 0.021 \\ \hline \end{array}$ | 2. $\begin{array}{r} 3.78 \\ + 0.21 \\ \hline \end{array}$ | 3. $\begin{array}{r} 13.2 \\ + 12.8 \\ \hline \end{array}$ | 4. $\begin{array}{r} 5.86 \\ - 1.51 \\ \hline \end{array}$ | 5. $\begin{array}{r} 42.07 \\ - 38.78 \\ \hline \end{array}$ |
| 6. $\begin{array}{r} 14.70 \\ + 351.82 \\ \hline \end{array}$ | 7. $\begin{array}{r} 42.3 \\ + 0.81 \\ \hline \end{array}$ | 8. $\begin{array}{r} 12.3 \\ - 0.847 \\ \hline \end{array}$ | 9. $\begin{array}{r} 342.9 \\ - 0.18 \\ \hline \end{array}$ | 10. $\begin{array}{r} 282.45 \\ - 111.3 \\ \hline \end{array}$ |
| 11. $\begin{array}{r} 100 \\ - 0.48 \\ \hline \end{array}$ | 12. $\begin{array}{r} 82.23 \\ + 0.88 \\ \hline \end{array}$ | 13. $\begin{array}{r} 128.01 \\ - 39.117 \\ \hline \end{array}$ | 14. $\begin{array}{r} 80.05 \\ - 79.06 \\ \hline \end{array}$ | 15. $\begin{array}{r} 104.98 \\ - 0.12 \\ \hline \end{array}$ |
| 16. $0.42 + 0.68$ | 17. $0.48 + 2.901$ | 18. $5.8 + 3.92$ | | |
| 19. $38.63 + 38.63$ | 20. $8 - 2.54$ | 21. $16.354 - 0.2$ | | |
| 22. $0.125 + 0.78$ | 23. $8.2 - 6.9$ | 24. $1.245 + 3.842$ | | |
| 25. $3.2 + 1.23$ | 26. $0.889 - 0.3$ | 27. $22.22 + 1.475$ | | |
| 28. $10 - 0.25$ | 29. $33.16 - 0.08$ | 30. $1.254 + 0.5$ | | |
| 31. $44.698 - 14.903$ | 32. $10 - 0.005$ | 33. $722.86 + 0.024$ | | |
| 34. $100.211 + 8.004$ | 35. $86.124 + 32.822$ | 36. $6.9 + 1.1$ | | |
| 37. $75 - 0.24$ | 38. $13 - 0.324$ | 39. $0.8 + 1.2$ | | |

40. What is the sum of 35.009 and 3.6?

41. Find 9.1 minus 5.625.

42. **AIR TRAVEL** The numbers of passengers, in millions, passing through four airports in a recent year were 80.2, 72.1, 68.5, and 60.7. Find the total number of passengers for the four airports.