

Estimating Products of Mixed Numbers

You can use rounding to estimate products of fractions and mixed numbers.
Round each factor to the nearest whole number, then multiply the whole numbers.

Example.

$$\begin{array}{ccc} 3\frac{1}{3} & \times & 5\frac{7}{10} \\ \frac{1}{3} < \frac{1}{2} & & \frac{7}{10} > \frac{1}{2} \\ \text{Round down} & & \text{Round up} \\ 3 & \times & 6 & = & 18 \end{array}$$

The estimate of $3\frac{1}{3} \times 5\frac{7}{10}$ is 18

Round each mixed number to the nearest whole number.

1. $9\frac{1}{2}$ _____ 2. $5\frac{1}{9}$ _____ 3. $3\frac{2}{3}$ _____ 4. $4\frac{2}{7}$ _____ 5. $6\frac{7}{10}$ _____

Estimate.

- | | | |
|-----------------------------------------------|------------------------------------------------|-----------------------------------------------|
| 6. $2\frac{1}{2} \times 2\frac{9}{12}$ _____ | 7. $8\frac{6}{7} \times 9\frac{4}{5}$ _____ | 8. $4\frac{2}{5} \times 8\frac{4}{9}$ _____ |
| 9. $11\frac{5}{6} \times 6\frac{1}{2}$ _____ | 10. $4\frac{2}{9} \times 6\frac{9}{12}$ _____ | 11. $7\frac{1}{2} \times 1\frac{9}{12}$ _____ |
| 12. $6\frac{1}{2} \times 4\frac{2}{5}$ _____ | 13. $3\frac{1}{2} \times 2\frac{9}{12}$ _____ | 14. $10\frac{1}{2} \times 7\frac{1}{2}$ _____ |
| 15. $8\frac{3}{9} \times 2\frac{8}{9}$ _____ | 16. $7\frac{1}{2} \times 7\frac{3}{7}$ _____ | 17. $4\frac{1}{5} \times 2\frac{3}{4}$ _____ |
| 18. $5\frac{1}{2} \times 7\frac{3}{5}$ _____ | 19. $3\frac{1}{8} \times 11\frac{7}{10}$ _____ | 20. $8\frac{2}{9} \times 6\frac{1}{5}$ _____ |
| 21. $6\frac{1}{4} \times 9\frac{3}{5}$ _____ | 22. $8\frac{3}{5} \times 3\frac{7}{9}$ _____ | 23. $6\frac{1}{5} \times 2\frac{2}{5}$ _____ |
| 24. $4\frac{2}{9} \times 3\frac{2}{3}$ _____ | 25. $7\frac{1}{5} \times 5\frac{8}{12}$ _____ | 26. $9\frac{1}{2} \times 5\frac{2}{7}$ _____ |
| 27. $4\frac{1}{2} \times 5\frac{4}{9}$ _____ | 28. $5\frac{1}{2} \times 6\frac{5}{12}$ _____ | 29. $4\frac{1}{8} \times 9\frac{7}{10}$ _____ |
| 30. $10\frac{1}{8} \times 9\frac{5}{7}$ _____ | 31. $5\frac{6}{7} \times 9\frac{4}{7}$ _____ | 32. $4\frac{1}{9} \times 8\frac{6}{9}$ _____ |
| 33. $8\frac{3}{8} \times 2\frac{3}{6}$ _____ | 34. $10\frac{1}{2} \times 8\frac{2}{9}$ _____ | 35. $4\frac{8}{11} \times 9\frac{6}{9}$ _____ |