

MULTIPLICATION BY ESTIMATION

ANSWERS

HELPFUL EXAMPLES

A.

$$\begin{array}{r} 42 \rightarrow 40 \\ \times 3 \rightarrow \times 3 \\ \hline 120 \end{array}$$

ROUND THE TOP NUMBER SO THAT YOU CAN QUICKLY SEE WHAT THE APPROXIMATE ANSWER WILL BE.

B.

$$\begin{array}{r} 78 \rightarrow 80 \\ \times 35 \rightarrow \times 40 \\ \hline 3,200 \end{array}$$

ESTIMATE THE NUMBERS. MULTIPLY THE 8 AND 4, WHICH EQUALS 32. THEN PUT THE TWO ZEROS INTO THE FINAL ANSWER.

NOW YOUR TURN. MULTIPLY USING ESTIMATION. SHOW YOUR ESTIMATIONS.

1. $\begin{array}{r} 51 \rightarrow 50 \\ \times 3 \rightarrow \times 3 \\ \hline 150 \end{array}$

2. $\begin{array}{r} 93 \quad 90 \\ \times 2 \quad \times 2 \\ \hline 180 \end{array}$

3. $\begin{array}{r} 37 \quad 40 \\ \times 7 \quad \times 7 \\ \hline 280 \end{array}$

4. $\begin{array}{r} 95 \quad 100 \\ \times 8 \quad \times 8 \\ \hline 800 \end{array}$

5. $\begin{array}{r} 28 \quad 30 \\ \times 9 \quad \times 9 \\ \hline 270 \end{array}$

6. $\begin{array}{r} 42 \quad 40 \\ \times 5 \quad \times 5 \\ \hline 200 \end{array}$

7. $\begin{array}{r} 68 \quad 70 \\ \times 4 \quad \times 4 \\ \hline 280 \end{array}$

8. $\begin{array}{r} 34 \quad 30 \\ \times 3 \quad \times 3 \\ \hline 90 \end{array}$

9. $\begin{array}{r} 65 \quad 70 \\ \times 21 \quad \times 20 \\ \hline 1,400 \end{array}$

10. $\begin{array}{r} 33 \quad 30 \\ \times 51 \quad \times 50 \\ \hline 1,500 \end{array}$

11. $\begin{array}{r} 79 \quad 80 \\ \times 37 \quad \times 40 \\ \hline 3,200 \end{array}$

12. $\begin{array}{r} 12 \quad 10 \\ \times 94 \quad \times 90 \\ \hline 900 \end{array}$

13. $\begin{array}{r} 58 \quad 60 \\ \times 82 \quad \times 80 \\ \hline 4,800 \end{array}$

14. $\begin{array}{r} 99 \quad 100 \\ \times 35 \quad \times 40 \\ \hline 4,000 \end{array}$

15. $\begin{array}{r} 60 \quad 60 \\ \times 46 \quad \times 50 \\ \hline 3,000 \end{array}$

16. $\begin{array}{r} 23 \quad 20 \\ \times 87 \quad \times 90 \\ \hline 1,800 \end{array}$

17. $\begin{array}{r} 17 \quad 20 \\ 34 \quad 30 \\ \times 11 \quad \times 10 \\ \hline 6,000 \end{array}$

MULTIPLY $2 \times 3 \times 1 = 6$. THEN PUT IN THE THREE 0's.

18. $\begin{array}{r} 32 \quad 30 \\ 15 \quad 20 \\ \times 28 \quad \times 30 \\ \hline 18,000 \end{array}$

19. $\begin{array}{r} 8 \quad 10 \\ 34 \quad 30 \\ \times 33 \quad \times 30 \\ \hline 9,000 \end{array}$

20. $\begin{array}{r} 42 \quad 40 \\ 21 \quad 20 \\ \times 35 \quad \times 40 \\ \hline 32,000 \end{array}$

21. $\begin{array}{r} 19 \quad 20 \\ 13 \quad 10 \\ \times 41 \quad \times 40 \\ \hline 8,000 \end{array}$

22. $\begin{array}{r} 64 \quad 60 \\ 2 \quad 0 \\ \times 35 \quad \times 40 \\ \hline 0 \end{array}$

23. $\begin{array}{r} 29 \quad 30 \\ 40 \quad 40 \\ \times 9 \quad \times 10 \\ \hline 12,000 \end{array}$

24. $\begin{array}{r} 53 \quad 50 \\ 18 \quad 20 \\ \times 25 \quad \times 30 \\ \hline 30,000 \end{array}$

25. $\begin{array}{r} 25 \quad 30 \\ 34 \quad 30 \\ \times 33 \quad \times 30 \\ \hline 27,000 \end{array}$

26. $\begin{array}{r} 31 \quad 30 \\ 12 \quad 10 \\ \times 38 \quad \times 40 \\ \hline 12,000 \end{array}$

27. $\begin{array}{r} 15 \quad 20 \\ 45 \quad 50 \\ \times 22 \quad \times 20 \\ \hline 20,000 \end{array}$

28. $\begin{array}{r} 77 \quad 80 \\ 89 \quad 90 \\ \times 3 \quad \times 0 \\ \hline 0 \end{array}$