

2x2 Multiplication

The "Mom and Dad" Method

Sample Problem: 36 x 42

Step 1: Write one number on top of the other, making sure that the place values are lined up correctly (ones above ones, tens above tens).

$$\begin{array}{r} 36 \\ \times 42 \\ \hline \end{array}$$

Sample Problem: 36×42

Step 2: Start in the ones place.
Multiply the ones by ones, and regroup if needed.

$$\begin{array}{r} \textcircled{1} \\ 36 \\ \times 42 \\ \hline 2 \end{array}$$

$$2 \times 6 = 12.$$

Put down the 2,
and regroup the
one. Circle what
you carried over.

Sample Problem: 36 x 42

Step 3: Continue in the ones place.
Multiply the ones by tens - do not regroup.
Write down your full answer.

$$\begin{array}{r} \textcircled{\times} \\ 36 \\ \times 42 \\ \hline \underline{72} \end{array}$$

$$2 \times 3 = 6.$$

$$6 + 1 = 7$$

Write down the 7.

Cross out the 1
that you carried
(so you don't
accidentally use
it later on).

Sample Problem: 36 x 42

Step 4: Go to the next line. Since we are in the tens place, we hold the ones place value by writing down a zero.

$$\begin{array}{r} \textcircled{\times} \\ 36 \\ \times 42 \\ \hline 72 \\ 0 \end{array}$$

We write the zero because we no longer multiply in the ones place.

Sample Problem: 36×42

Step 5: Multiply the tens by ones, and regroup if necessary.

$$\begin{array}{r} \text{②} \text{ⓧ} \\ 36 \\ \times 42 \\ \hline 72 \\ \underline{40} \end{array}$$

$$4 \times 6 = 24.$$

Put down the 4,
and regroup the
two. Circle what
you carried over.

Sample Problem: 36×42

Step 6: Continue in the tens place.
Multiply the tens by tens - do not regroup.
Write down your full answer.

$$\begin{array}{r} \textcircled{2} \textcircled{\times} \\ 36 \\ \times 42 \\ \hline 72 \\ \underline{1440} \end{array}$$

$$4 \times 3 = 12.$$

$$12 + 2 = 14$$

Write down the
14. Be sure to
write the whole
number.

Sample Problem: 36 x 42

Step 7: Add the two lines together. Be sure that your place values are properly lined up.

$$\begin{array}{r} \textcircled{2} \textcircled{\times} \\ 36 \\ \times 42 \\ \hline \end{array}$$

$$\begin{array}{r} \textcircled{1} 72 \\ + 1440 \\ \hline 1512 \end{array}$$

$$2 + 0 = 2$$

$$7 + 4 = 11$$

(Put down the one and carry the other one)

$$1 + 4 = 5$$

$$1 + 0 = 1$$

Step 8: Bask in your awesomeness.

$$36 \times 42 = 1,512$$