

Multiplication Strategies

Standard Algorithm for Multiplication:

$$\begin{array}{r}
 ^1 \\
 32 \\
 \underline{\times 15} \\
 160 \quad (5 \times 32) \\
 + 320 \quad (10 \times 32) \\
 \hline
 480
 \end{array}$$

First multiply the top number by the ones digit, regrouping if necessary.

Then multiply the top number by the tens digit.

Add to find the total.

Partial Product: *Break the numbers into smaller 'friendlier' numbers*

Area Model: 32×76

	70	+ 6	
30	2,100	180	2,100 180 140 <u>+ 12</u> 2,432
+			
2	140	12	

Over/Under:

Close to a benchmark number

$$\begin{aligned}
 98 \times 42 &= \\
 (100 \times 42) - (2 \times 42) &= \\
 4,200 - 84 &= 4,116
 \end{aligned}$$

Expanded Form:

$$\begin{array}{r}
 152 = 152 \quad 152 \\
 \underline{\times 42 = 40 + 2} \\
 6080 + 304 = 6,384
 \end{array}$$