

Multidigit Multiplication Strategies Menu

Mental Math and Estimation

Mental Strategies

Using Simpler Numbers

$$\begin{aligned} 205 \times 8 &= (200 \times 8) + (5 \times 8) \\ &= 1600 + 40 \\ &= 1640 \end{aligned}$$



$$\begin{aligned} 72 \times 99 &= (72 \times 100) - 72 \\ &= 7200 - 72 \\ &= 7128 \end{aligned}$$

Other Methods I Use

Using Convenient Numbers to Estimate

$$63 \times 28$$

↙

$$\begin{array}{r} 60 \\ \times 30 \\ \hline 1800 \end{array}$$

1800 is a reasonable estimate.



Halving and Doubling

$$264 \times 5$$

I know multiplying by 10 is easier than multiplying by 5. I double 5 to 10 and I take $\frac{1}{2}$ of 264 which is 132. $132 \times 10 = 1320$. Or I could multiply $264 \times 10 = 2640$ and take half of that: 1320.



Finding a Range

$$45 \times 65$$

$$\begin{aligned} 40 \times 60 &= 2400 \\ 50 \times 70 &= 3500 \end{aligned}$$

The exact answer will be between 2400 and 3500, or about 3000.

