

# More Mental Math

<p>To <b>multiply</b> <math>2,000 \times 120</math>, simply multiply <math>2 \times 12</math>, and place four zeros on the end of the answer:</p> <p><math>2,000 \times 120 = 240,000</math></p>	<p>Solve <b>division</b> by thinking of multiplication “backwards”:</p> <p><math>5,600 \div 70 = ?</math></p> <p>Think what number times 70 will give you 5,600. Since <math>70 \times 80 = 5,600</math>, then <math>5,600 \div 70 = 80</math>.</p>	<p>You can <b>add in parts</b>.</p> <p><math>76 + 120 + 65 = ?</math></p> <p>First add <math>70 + 120 + 60 = 250</math>. Then, <math>6 + 5 = 11</math>. Lastly, <math>250 + 11 = 261</math>.</p>
<p>The <b>order of operations</b> is: 1. Parentheses 2. Exponents; 3. Multiplication and division; 4. Addition and subtraction.</p>		
<p>To calculate <math>9 \times 80 - 10 \times 70</math>, first solve <math>9 \times 80</math> and <math>10 \times 70</math>. Subtract only after those calculations.</p> <p><math>9 \times 80 - 10 \times 70</math> <math>= 720 - 700 = 20</math></p>	<p>In the expression <math>4,500 \div (5 + 45) \times 80</math>, solve <math>5 + 45</math> first. Then, divide.</p> <p><math>4,500 \div (5 + 45) \times 80</math> <math>= 4,500 \div 50 \times 80</math> <math>= 90 \times 80 = 7,200</math></p>	

1. Solve in your head.

<p>a. <math>410 + 2 \times 19</math></p> <p>=</p>	<p>b. <math>3 \times 50 + 4 \times 150</math></p> <p>=</p>	<p>c. <math>70 \times 80 - 40 \times 50</math></p> <p>=</p>
<p>d. <math>14 + (530 - 440)</math></p> <p>=</p>	<p>e. <math>45 + 56 + 35</math></p> <p>=</p>	<p>f. <math>300 \div 5 - 400 \div 10</math></p> <p>=</p>

2. Solve in your head.

a.  $17 + \underline{\hspace{2cm}} = 110$       b.  $345 + \underline{\hspace{2cm}} = 1,000$       c.  $3 \times 40 + \underline{\hspace{2cm}} = 500$

3. Divide. Remember that division can also be written using a fraction line.

a.  $\frac{240}{4} =$       c.  $\frac{72}{9} =$       e.  $\frac{5,600}{10} =$       g.  $\frac{420}{20} =$       i.  $\frac{420}{70} =$

b.  $\frac{7,200}{100} =$       d.  $\frac{450}{9} =$       f.  $\frac{8,000}{200} =$       h.  $\frac{10,000}{50} =$       j.  $\frac{7,200}{800} =$