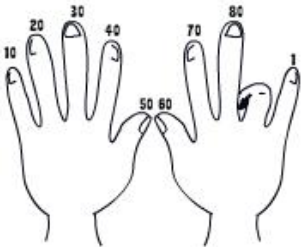


Factors	Time table strategy	Divisibility rules
2	Double it!  $6 \times 2 \longrightarrow 6 + 6 = 12$	The last digit is even. (0,2,4,6,8)
3	Learn facts - $1 \times 3$ $3 \times 3$ $6 \times 3$ $7 \times 3$ $9 \times 3$	Add up the digits of the number you want to find out. If the digit sum is 3, 6 or 9, it is in the x3 table.  Let's look at 15.  The digits are 1 and 5. Add those together and you get 6 $1 + 5 = 6$ .  So 15 is in the 3 x table.
4	Double, double!  $8 \times 4 \longrightarrow 8 + 8 = 16 \longrightarrow 16 + 16 = 32$	The last 2 digits are divisible by 4: $1312$ - yes $7019$ - no  Small numbers - halve the number twice and the result is still a whole number e.g. 12 $12$ divided by 2 = 6, 6 divided by 2 = 3, 3 is a whole number.

5	Five times an odd number ends with 5, and five times an even number ends with 0.	If it ends with 0 or 5, its a multiple of five, otherwise it's not.
6	Multiply by 3 and double.	Even and divisible by 3. If it passes the rules for x2 and x 3 e.g. 114 - It is even, and 1+1+4=6 and 6 divided 3 = 2
7	Use commutative rule by looking at other times table facts.	<p>Double the last digit and subtract it from a number made by the other digits. The result must be divisible by 7. (We can apply this rule to that answer again)</p> <p>➔ 672 (Double 2 is 4, 67-4=63, and 63÷7=9) <b>Yes</b></p> <p>➔ 105 (Double 5 is 10, 10-10=0, and 0 is divisible by 7) <b>Yes</b></p>
8	<p>Double, double, double!</p> <p><math>6 \times 8 \longrightarrow 6+6=12 \longrightarrow 12+12=24 \longrightarrow 24+24 = 48</math></p>	<p>The last three digits are divisible by 8</p> <p>➔ 109<b>816</b> (<math>816 \div 8 = 102</math>) <b>Yes</b></p> <p>➔ 216<b>302</b> (<math>302 \div 8 = 37 \frac{3}{4}</math>) <b>No</b></p>
9	<p>Multiply by 10 and subtract a group.</p> <p><math>6 \times 9 \longrightarrow 6 \times 10 = 60 \longrightarrow 60 - 6 = 54</math></p>	The sum of the digits are divisible by 9.

	<p style="text-align: center;"><b><math>9 \times 9 = 81</math></b></p>  <ul style="list-style-type: none"> <li>- Each finger to the left of the curled finger represents 10.</li> <li>- Say 10, 20, 30, 40, 50, 60, 70, 80</li> <li>- Each finger to the right of the curled finger represents one.</li> <li>- Count <b>1</b>. (Or <b>81</b>)</li> <li>- <b><math>9 \times 9 = 81</math></b></li> </ul>	<p>The sum of the digits is divisible by 9</p> <p>(Note: This rule can be repeated when needed)</p> <p>➔ 1629 (1+6+2+9=18, and again, 1+8=9) <b>Yes</b></p> <p>➔ 2013 (2+0+1+3=6) <b>No</b></p>
10	<p>Count by 10's or add zero as a place holder.</p> <p><math>4 \times 10 \longrightarrow 10, 20, 30, 40</math></p>	The number ends in 0.
11	<p>Multiples of 11 that are less than one hundred are simply the multiplied digit repeated: so <math>2 \times 11 = 22</math>, <math>3 \times 11 = 33</math>, <math>4 \times 11 = 44</math></p>	

12	<p>Multiply by 10 and add a double.</p> $6 \times 12 \longrightarrow 6 \times 10 = 60 \longrightarrow 60 + 12 = 72$	<p>The number is divisible by both 3 <b>and</b> 4 (it passes both the 3 rule and 4 rule above)</p> <p>648 (By 3? <math>6+4+8=18</math> and <math>18 \div 3=6</math> Yes) (By 4? <math>48 \div 4=12</math> Yes) Both pass, so <b>Yes</b></p> <p>524 (By 3? <math>5+2+4=11</math>, <math>11 \div 3=3 \frac{2}{3}</math> No) (Don't need to check by 4) <b>No</b></p>
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