



# DIVISIBILITY RULES 1-10 CHART

EVEN NUMBERS	ODD NUMBERS	DIVISIBLE BY 1
All <b>integers</b> where the last digit ends in 0, 2, 4, 6 or 8.	All <b>integers</b> where the last digit ends in 1, 3, 5, 7 or 9.	All <b>integers</b> are divisible by 1.
328 is even as the last digit is 8. 1314 is even as the last digit is 4.	1907 is odd as the last digit is 7. 2403 is odd as the last digit is 3.	147 is <b>divisible</b> by 1. 12.8 is <b>not divisible</b> by 1 because it is not an integer.
DIVISIBLE BY 2	DIVISIBLE BY 3	DIVISIBLE BY 4
All <b>even</b> integers are divisible by 2.	All <b>integers</b> where the total of the digits is divisible by 3 (in the 3 times table). This rule can be repeated if needed.	All <b>even</b> integers whose last two digits are divisible by 4.  <i>A quick way to test this is to halve the last two digits twice and see if you get a whole number.</i>
318 is <b>divisible</b> by 2 because the last digit is 8 which is even. 513 is <b>not divisible</b> by 2 because it is an odd number.	714 is <b>divisible</b> by 3 because $7+1+4=12$ and $12\div 3=4$ (divisible). 3515 is <b>not divisible</b> by 3 because $3+5+1+5=14$ and $14\div 3=4\frac{2}{3}$ (not divisible).	1328 is <b>divisible</b> by 4 because $28\div 4=7$ . 793 is <b>not divisible</b> by 4 because it is odd. 870 is <b>not divisible</b> by 4 because half of $70=35$ and half of $35=17\frac{1}{2}$ .
DIVISIBLE BY 5	DIVISIBLE BY 6	DIVISIBLE BY 7
All <b>integers</b> whose last digit is a 0 or 5.	All <b>even</b> integers which are divisible by 3 (see Divisible by 3 test).	Double the last digit and subtract the result from the number made by the other digits and see if it is divisible by 7. Repeat again if needed.
4185 is <b>divisible</b> by 5 because the last digit is 5. 319 is <b>not divisible</b> by 5 because the last digit is 9.	432 is <b>divisible</b> by 3 because it is even and the total of the digits is $4+3+2=9$ and $9\div 3=3$ (divisible). 158 is <b>not divisible</b> by 3 because $1+5+8=14$ and $14\div 3=4\frac{2}{3}$ (not divisible).	1057 is <b>divisible</b> by 7 because $105-2\times 7=91$ . $91\div 7=13$ (divisible). 841 is <b>not divisible</b> by 7 because $84-2\times 1=82$ . $82\div 7=11\frac{5}{7}$ (not divisible).
DIVISIBLE BY 8	DIVISIBLE BY 9	DIVISIBLE BY 10
All <b>even</b> integers where the last 3 digits are divisible by 8.  <i>A quick way to test this is to halve the last 3 digits three times and see if you get a whole number.</i>	All <b>integers</b> where the total of the digits is divisible by 9 (in the 9 times tables). This rule can be repeated if needed.	All <b>integers</b> whose last digit is 0.
5312 is <b>divisible</b> by 8 because half of 312 is 156, half of 156 is 78 and half of $78=39$ (a whole number). 1207 is <b>not divisible</b> by 8 because it is odd. 4284 is <b>not divisible</b> by 8 because half of $284=142$ and half of 142 is 71 and half of 71 is 35.5 (not a whole number)	2745 is <b>divisible</b> by 9 because $2+7+4+5=18$ which is divisible by 9. 702 is <b>divisible</b> by 9 because $7+0+2=9$ which is divisible by 9. 1024 is <b>not divisible</b> by 9 because $1+0+2+4=7$ which is not divisible by 9.	5120 is <b>divisible</b> by 10 because the last digit is 0. 8039 is <b>not divisible</b> by 10 because the last digit is 9. 2815 is <b>not divisible</b> by 10 because the last digit is 5.

- An **integer** is a whole number which can be positive or negative.