Name _____   Date _____

DIVISIBILITY RULES 1-10 CHART

If a number is **divisible** by another number it means that it divides into the other number with no remainder.

14 **is divisible** by 2 because 14 ÷ 2 = 7. 23 **is not divisible** by 4 because 23 ÷ 4 = 5.75.

DIVISIBLE BY 1	DIVISIBLE BY 2
All **integers** are divisible by 1.	All **even** integers are divisible by 2. A number is even if the last digit is 0, 2, 4, 6, or 8.
147 **is divisible** by 1 because it is a whole number. 2059 **is divisible** by 1 because it is a whole number. 12.8 **is not divisible** by 1 because it is not an integer.	318 **is divisible** by 2 because the last digit is 8. 507 **is not divisible** by 2 because it ends in a 7. 13 **is not divisible** by 2 because it ends in a 3.
DIVISIBLE BY 3	DIVISIBLE BY 4
All **integers** where the total of the digits is divisible by 3 (in the 3 times table). This rule can be repeated again if needed.	All **even** integers whose last two digits are divisible by 4. *A quick way to test this is to halve the last two digits twice and see if you get a whole number.*
714 **is divisible** by 3 because 7+1+4=12 and 12÷3=4 (divisible). 3515 **is not divisible** by 3 because 3+5+1+5=14. Repeat the rule: 1+4=5. Not divisible by 3.	1328 **is divisible** by 4 because 28÷4=7. 793 **is not divisible** by 4 because it is odd. *870 is not divisible by 4 because half of 70=35 and half of 35=17 ½*
DIVISIBLE BY 5	DIVISIBLE BY 6
All **integers** whose last digit is a 0 or 5.	All **even** integers which are divisible by 3 (see Divisible by 3 test).
4185 **is divisible** by 5 because the last digit is 5. 319 **is not divisible** by 5 because the last digit is 9.	432 **is divisible** by 3 because it is even and the total of the digits is 4+3+2=9 and 9÷3=3 (divisible). 158 **is not divisible** by 3 because 1+5+8=14 and 14÷3=4 $\frac{2}{3}$ (not divisible).
DIVISIBLE BY 7	DIVISIBLE BY 8
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.	All **even** integers where the last 3 digits are divisible by 8. *A quick way to test this is to halve the last 3 digits three times and see if you get a whole number.*
1057 **is divisible** by 7 because 105-2x7=91. 91÷7=13 (divisible). 2786 **is divisible** by 7 because 278-2x6=266. Repeat: 26-2x6=14. 14÷7=2 (divisible). 841 **is not divisible** by 7 because 84–2x1=82. 82÷7=11 $\frac{5}{7}$ (not divisible).	5312 **is divisible** by 8 because 312÷8=39. 1207 **is not divisible** by 8 because it is odd. *4284 is not divisible by 8 because half of 284=142 and half of 142 is 71 and half of 71 is 35 ½ (not an integer)*
DIVISIBLE BY 9	DIVISIBLE BY 10
All **integers** where the total of the digits is divisible by 9 (in the 9 times tables). This rule can be repeated again if needed.	All **integers** whose last digit is 0.
2745 **is divisible** by 9 because 2+7+4+5=18. Repeat the rule: 1+8=9. Yes - Divisible by 9. 702 **is divisible** by 9 because 7+0+2=9 which is divisible by 9. 1024 **is not divisible** by 9 because 1+0+2+4=7 which is not divisible by 9.	5120 **is divisible** by 10 because the last digit is 0. 8039 **is not divisible** by 10 because the last digit is 9. 2815 **is not divisible** by 10 because the last digit is 5.

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