

FACTORS & MULTIPLES

5.3a The student will identify and describe the characteristics of prime and composite numbers.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Multiples of 2: black underline	Multiples of 7: Brown X
Multiples of 3: red box	Multiples of 8: partially shade pink
Multiples of 4: orange triangle	Multiples of 9: partially shade green
Multiples of 5: partially shade blue	Multiples of 10: Grey X
Multiples of 6: purple circle	Prime Numbers: Shade yellow

<u>Multiples</u>	<u>Factors</u>
<p>What they are:</p> <ul style="list-style-type: none"> - Multiples are created by (multiplying/dividing). - Multiples are generally (smaller/bigger) than the number you start with and are (limited/limitless). - We use multiples to (simplify fractions/create equivalent fractions) and to (create groups of a certain size/ split a number into equal sized groups). 	<p>What they are:</p> <ul style="list-style-type: none"> - Factors are created by (multiplying/dividing). - Factors are generally (smaller/bigger) than the number you start with and are (limited/limitless). - We use factors to (simplify fractions/create equivalent fractions) and to (create groups of a certain size/ split a number into equal sized groups).
<p>How we find them:</p> <ul style="list-style-type: none"> - Starting with 1, multiply your number by each whole number, counting up. 	<p>How we find them:</p> <ul style="list-style-type: none"> - Start with 1 and your number, leaving room in between. Check each divisibility rule to see how your number can be divided.
<p>Example: Is 48 a multiple of 6?</p>	<p>Example: What are the factors of 36?</p>

Divisibility Rules (for numbers 2 – 99)

2	If the ones digit is 0, 2, 4, 6, or 8.	8	If the last 3 digits are divisible by 8
3	If the sum of the digits is divisible by 3.	9	If the sum of the digits is divisible by 9.
4	If the last two digits are divisible by 4.	10	If the last digit is 0
5	If the ones digit is 0 or 5.	11	If you can subtract last digit from first two and get 11.
6	If the number is divisible by 2 and 3.	12	If the number is divisible by 3 and 4.

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<p>Example: Is 48 a multiple of 6?</p> <p>$1 \cdot 6, 2 \cdot 6, 3 \cdot 6, 4 \cdot 6, 5 \cdot 6, 6 \cdot 6, 7 \cdot 6, 8 \cdot 6$ Yes!</p>	<p>Example: What are the factors of 36?</p> <p>$36: 1, 2, 3, 4, 6, 9, 12, 18, 36$</p>

Divisibility Rules (for numbers 2 – 99)

2	If the ones digit is 0, 2, 4, 6, or 8.	8	If the last 3 digits are divisible by 8. <i>all are even</i>
3	If the sum of the digits is divisible by 3.	9	If the sum of the digits is divisible by 9.
4	If the last two digits are divisible by 4. <i>All are even</i>	10	If the last digit is 0. <i>all are even</i>
5	If the ones digit is 0 or 5.	11	If you can subtract last digit from first two and get 11.
6	If the number is divisible by 2 and 3. <i>all are even</i>	12	If the number is divisible by 3 and 4. <i>all are even</i>

