



ALGEBRA STRAND

*Teaching Guides
Learning Activities &
Worksheets*



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Hundred-Chart Pattern

1. A cross/plus sign has been highlighted on the hundred-chart. Examine the numbers above, below and beside (to the right and left) of the centre number. On your hundred-board, make at least 4 more crosses and discuss the patterns in your group.

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

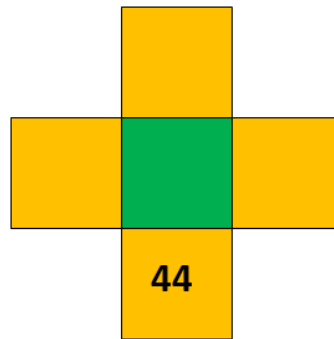
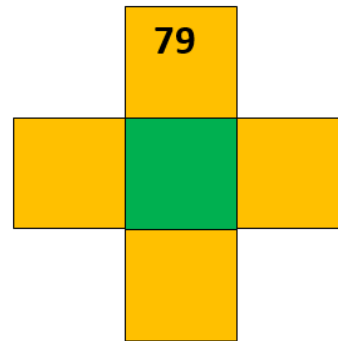
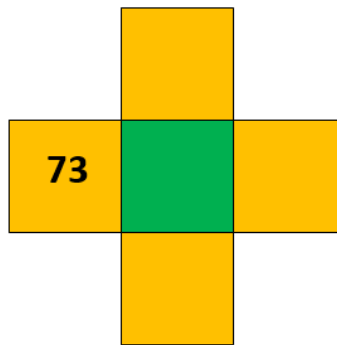
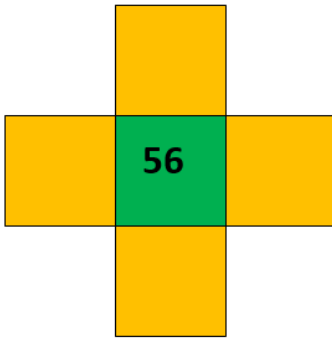
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91	92	93	94	95	96	97	98	99	100

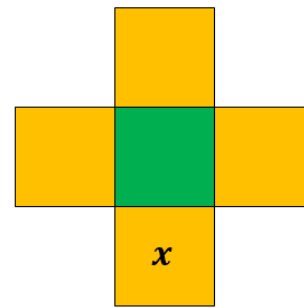
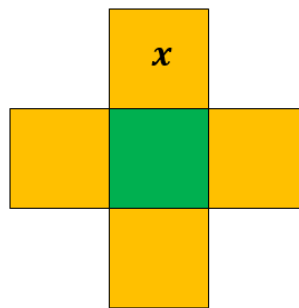
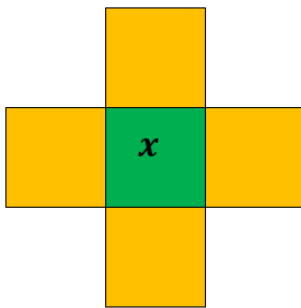
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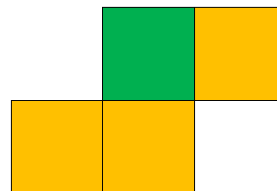
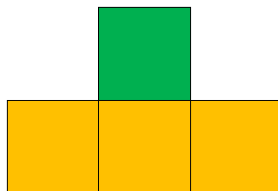
2. Without the use of the hundred-chart, complete the following crosses.



3. How would you complete the following crosses?



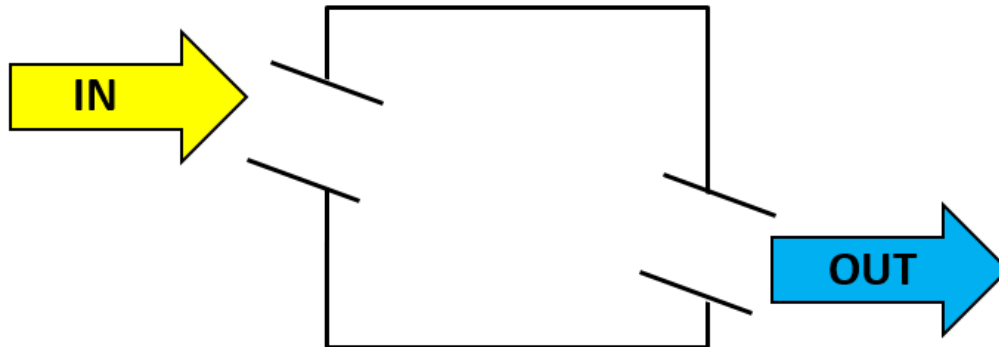
4. What patterns would you observe if you had the following shapes on the *hundred-chart*?





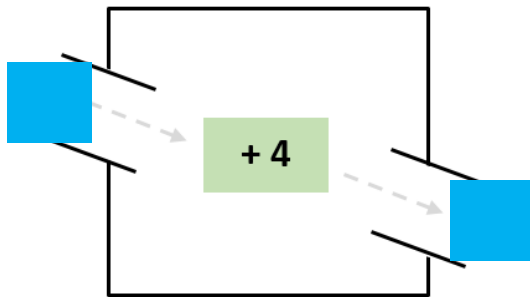
Operation Machine

Teacher Instructional Guided Activities

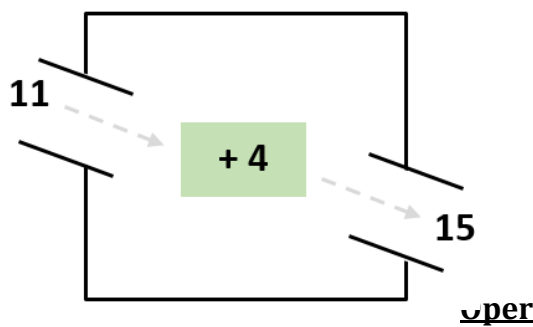


In an operation machine,

- Numbers go in
- An operation is performed
- And a new number comes out



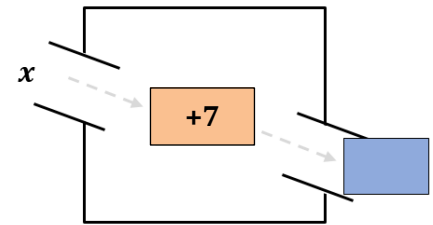
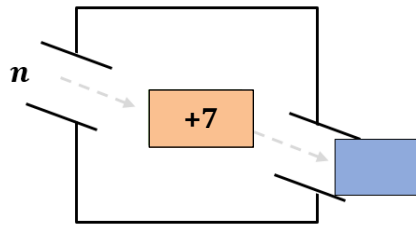
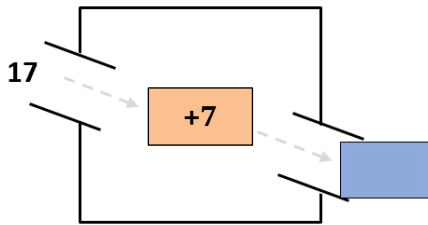
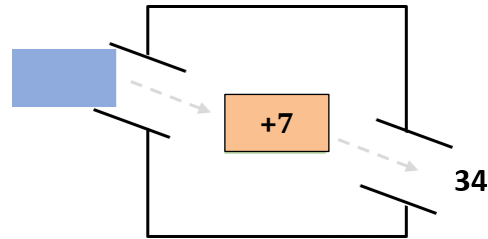
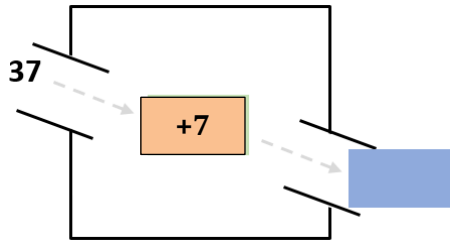
- ✓ This is a “Plus 4” machine
- ✓ The machine adds 4 to any number that goes in
- ✓ The number that comes out is **4 more than** the number that goes in
- ✓ The number that goes in is **4 less than** the number that goes out



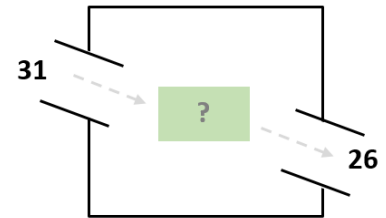
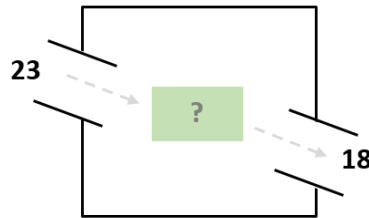
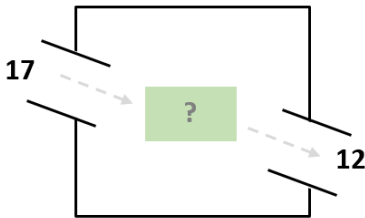
- ✓ “11” goes into the machine
- ✓ The number “4” is added to “11”
- ✓ The number that comes out is “15” which is **4 more than** the number which went in.



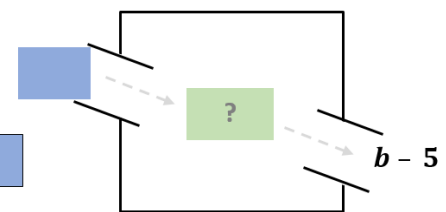
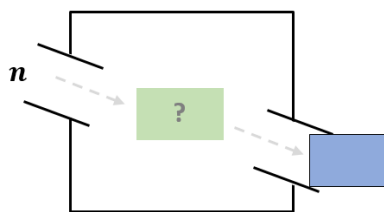
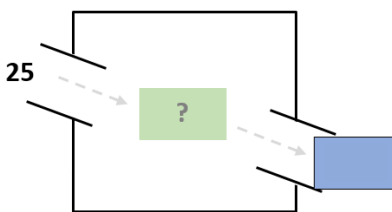
1) How would you complete these “Plus 7” machines?



2) On each machine below, the same rule is being used to convert the ‘in’ number to the ‘out’ number. What is the rule?



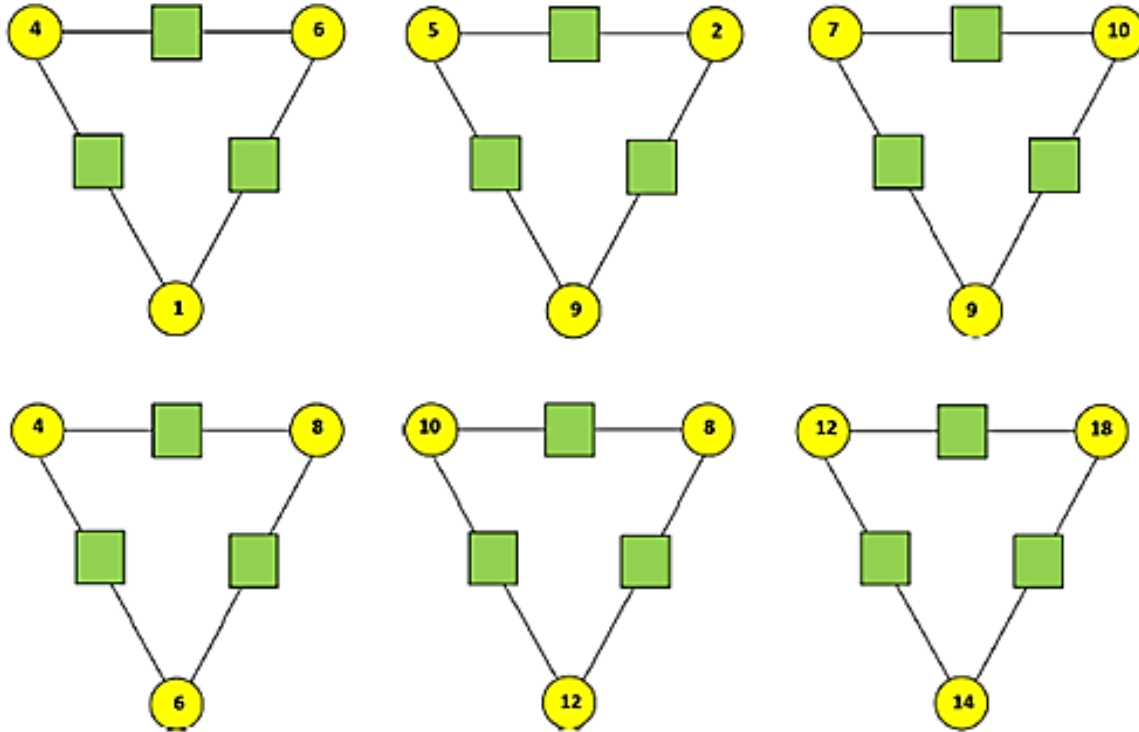
3) Use the rule you discovered from the above machines, to complete these machines:





Arithmagons

Starter: Try these *arithmagons*. Which number should go in the squares?



Main Activity: Use each arithmagon below to write and solve a number sentence for each variable

	<p style="text-align: center;">NUMBER SENTENCES</p> <p>(1) _____ $a =$ <input type="text"/></p> <p>(2) _____ $b =$ <input type="text"/></p> <p>(3) _____ $c =$ <input type="text"/></p>
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	<p>NUMBER SENTENCES</p> <p>(4) _____ $p =$ <input type="text"/></p> <p>(5) _____ $n =$ <input type="text"/></p> <p>(6) _____ $x =$ <input type="text"/></p>
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	<p>NUMBER SENTENCES</p> <p>(7) _____ $a =$ <input type="text"/></p> <p>(8) _____ $b =$ <input type="text"/></p>
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	<p>NUMBER SENTENCES</p> <p>(9) _____ $a =$ <input type="text"/></p> <p>(10) _____ $b =$ <input type="text"/></p>
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	<p>NUMBER SENTENCES</p> <p>(11) _____ $a =$ <input type="text"/></p> <p>(12) _____ $b =$ <input type="text"/></p> <p>(13) _____ $c =$ <input type="text"/></p>
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