

GO MATHS

ACE

STUDENT JOURNAL

YEAR
3

SAMPLE PAGES

Australian Curriculum Edition

AUTHORS

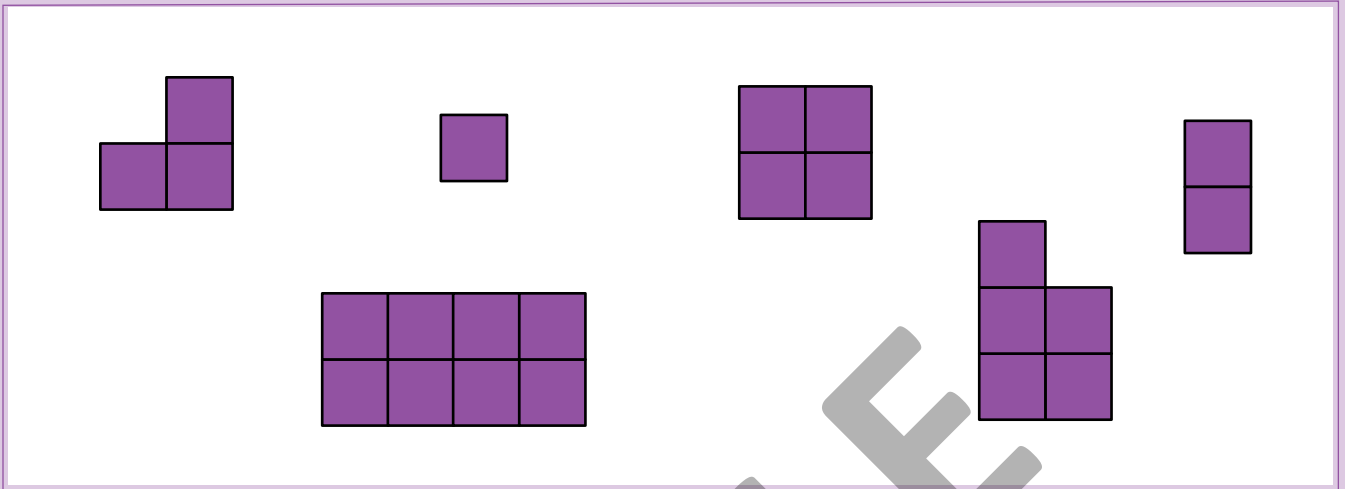
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Investigating Odd and Even Number Patterns

1. a. Loop the pictures that show odd numbers.



- b. What do you notice about each odd number?

2. a. Colour the even 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

- b. How do you know that each number is even?

Exploring Patterns of Three

- a. Start at 3. Count in steps of 3. Colour the numbers you say.

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

- b. Describe the pattern that you see.

- c. Add the digits of any two-digit number that you shaded. Write the total in the first box below then complete the sentence.

shared by 3 is .

- d. Compare your sentence with a classmate. Can each shaded number be evenly shared?



Investigating Addition Number Patterns

1. Colour each **starting number** purple. Colour each **total** red. Write the answers.

a.

$6 + 8 = \underline{\quad}$

$16 + 8 = \underline{\quad}$

$26 + 8 = \underline{\quad}$

$36 + 8 = \underline{\quad}$

$46 + 8 = \underline{\quad}$

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

b. What patterns can you see?

2. Write the answers. Use number patterns to help.

a.

$8 + 4 = \underline{\quad}$

$18 + 4 = \underline{\quad}$

$28 + 4 = \underline{\quad}$

$38 + 4 = \underline{\quad}$

$48 + 4 = \underline{\quad}$

b.

$23 + 9 = \underline{\quad}$

$24 + 9 = \underline{\quad}$

$25 + 9 = \underline{\quad}$

$26 + 9 = \underline{\quad}$

$27 + 9 = \underline{\quad}$

c.

$41 + 8 = \underline{\quad}$

$42 + 8 = \underline{\quad}$

$43 + 8 = \underline{\quad}$

$44 + 8 = \underline{\quad}$

$45 + 8 = \underline{\quad}$

Extending Addition Number Patterns

1. Roll two labelled cubes. Choose one number to write in any number sentence in any set to make a true sentence.

SET A

$13 + \underline{\quad} = 14$

$13 + \underline{\quad} = 15$

$13 + \underline{\quad} = 16$

$13 + \underline{\quad} = 17$

$13 + \underline{\quad} = 18$

$13 + \underline{\quad} = 19$

SET B

$13 + \underline{\quad} = 23$

$13 + \underline{\quad} = 33$

$13 + \underline{\quad} = 43$

$13 + \underline{\quad} = 53$

$13 + \underline{\quad} = 63$

$13 + \underline{\quad} = 73$

SET C

$\underline{\quad} + 6 = 66$

$50 + \underline{\quad} = 55$

$\underline{\quad} + 4 = 44$

$30 + \underline{\quad} = 33$

$\underline{\quad} + 2 = 22$

$10 + \underline{\quad} = 11$

2. a. In Set A, how did the ones digits in the answers change?

- b. In Set B, how did the tens digits in the answers change?

3. Write the missing numbers in each set.

a.

$48 + \underline{\quad} = 65$

$49 + \underline{\quad} = 65$

$50 + \underline{\quad} = 65$

$51 + \underline{\quad} = 65$

$52 + \underline{\quad} = 65$

b.

$95 = \underline{\quad} + 77$

$95 = \underline{\quad} + 76$

$95 = \underline{\quad} + 75$

$95 = \underline{\quad} + 74$

$95 = \underline{\quad} + 73$

c.

$13 + \underline{\quad} = 105$

$14 + \underline{\quad} = 105$

$15 + \underline{\quad} = 105$

$16 + \underline{\quad} = 105$

$17 + \underline{\quad} = 105$

Investigating Subtraction Number Patterns

1. Work in a group with two labelled cubes. Roll the cubes and choose one number to write in any number sentence in any set to make a true sentence.

<p>a.</p> $22 - \square = 19$ $22 - \square = 18$ $22 - \square = 17$ $22 - \square = 16$ $22 - \square = 15$ $22 - \square = 14$	<p>b.</p> $81 - \square = 21$ $71 - \square = 21$ $61 - \square = 21$ $51 - \square = 21$ $41 - \square = 21$ $31 - \square = 21$	<p>c.</p> $66 - \square = 6$ $55 - 50 = \square$ $44 - \square = 4$ $33 - 30 = \square$ $22 - \square = 2$ $11 - 10 = \square$
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2. For each set above, which numbers changed in each sentence?

<p>a.</p> <hr/>
<p>b.</p> <hr/>
<p>c.</p> <hr/>

3. Write the missing numbers in each set.

<p>a.</p> $65 - \square = 48$ $65 - \square = 49$ $65 - \square = 50$ $65 - \square = 51$ $65 - \square = 52$	<p>b.</p> $\square - 27 = 75$ $\square - 26 = 75$ $\square - 25 = 75$ $\square - 24 = 75$ $\square - 23 = 75$	<p>c.</p> $105 = \square - 35$ $104 = \square - 35$ $103 = \square - 35$ $102 = \square - 35$ $101 = \square - 35$
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