



GO

ACE

MATHS

STUDENT JOURNAL

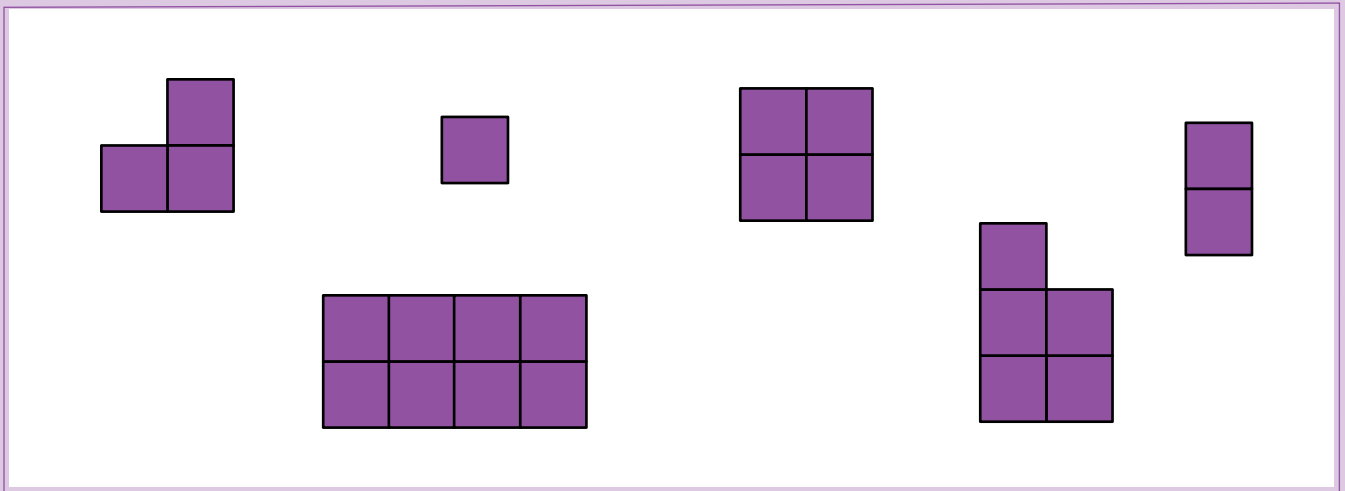
SAMPLE PAGES

YEAR

3

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.

a.	b.	c.
$22 - \underline{\quad} = 19$	$81 - \underline{\quad} = 21$	$66 - \underline{\quad} = 6$
$22 - \underline{\quad} = 18$	$71 - \underline{\quad} = 21$	$55 - 50 = \underline{\quad}$
$22 - \underline{\quad} = 17$	$61 - \underline{\quad} = 21$	$44 - \underline{\quad} = 4$
$22 - \underline{\quad} = 16$	$51 - \underline{\quad} = 21$	$33 - 30 = \underline{\quad}$
$22 - \underline{\quad} = 15$	$41 - \underline{\quad} = 21$	$22 - \underline{\quad} = 2$
$22 - \underline{\quad} = 14$	$31 - \underline{\quad} = 21$	$11 - 10 = \underline{\quad}$

2. For each set above, which numbers changed in each sentence?

a.	<input type="text"/>
b.	<input type="text"/>
c.	<input type="text"/>

3. Write the missing numbers in each set.

a.	b.	c.
$65 - \underline{\quad} = 48$	$\underline{\quad} - 27 = 75$	$105 = \underline{\quad} - 35$
$65 - \underline{\quad} = 49$	$\underline{\quad} - 26 = 75$	$104 = \underline{\quad} - 35$
$65 - \underline{\quad} = 50$	$\underline{\quad} - 25 = 75$	$103 = \underline{\quad} - 35$
$65 - \underline{\quad} = 51$	$\underline{\quad} - 24 = 75$	$102 = \underline{\quad} - 35$
$65 - \underline{\quad} = 52$	$\underline{\quad} - 23 = 75$	$101 = \underline{\quad} - 35$