

# Multiplication and division strategies

AC

EA

AA

AM

AP

## Double Double Boil and Bubble

We are practising doubling numbers with 2 or more digits.

### Exercise 1 – W or Nothing!

What to do

- 1) Use your doubling strategies to double these numbers
- 2) Do the problems in your head
- 3) Record the answers

- |        |         |          |
|--------|---------|----------|
| 1) 2   | (2) 12  | (3) 42   |
| 4) 3   | (5) 23  | (6) 34   |
| 7) 4   | (8) 44  | (9) 84   |
| 10) 5  | (11) 65 | (12) 125 |
| 13) 7  | (14) 27 | (15) 47  |
| 16) 6  | (17) 36 | (18) 56  |
| 19) 9  | (20) 19 | (21) 59  |
| 22) 8  | (23) 38 | (24) 68  |
| 25) 67 | (26) 75 | (27) 175 |
| 28) 93 | (29) 95 | (30) 99  |

Describe a **doubling strategy** and share this idea with your partner.

How could you use this idea to halve a number? Try it!

## Exercise 2 – Seeing DDouble on the 100s BBoard

You need a hundreds chart (maybe several) and two counters.

What to do

- 1) Use your doubling strategies to double these numbers
- 2) Double each number and place a counter on the hundreds board showing BOTH the number and its double.

1) 21	(2) 13	(3) 48
4) 32	(5) 24	(6) 39
7) 42	(8) 45	(9) 54
10) 53	(11) 69	(12) 154
13) 72	(14) 74	(15) 79
16) 64	(17) 37	(18) 55
19) 92	(20) 18	(21) 58
22) 83	(23) 39	(24) 63
25) 62	(26) 71	(27) 575
28) 91	(29) 96	(30) 98

Moving down and moving across...what do you notice?

How could you use this idea to halve a number? Try it!

## Exercise 3 – Seeing DDoubles on the NNumberline

You need a numberline from 1 to 100, two counters and some floor space.

What to do

- 1) Use your doubling strategies to double these numbers
- 2) Double each number and place a counter on the numberline showing BOTH the number and its double.

1) 22	(2) 26	(3) 28
4) 31	(5) 33	(6) 37
7) 14	(8) 43	(9) 45
10) 51	(11) 57	(12) 58
13) 61	(14) 71	(15) 81
16) 16	(17) 76	(18) 86
19) 77	(20) 87	(21) 97
22) 78	(23) 88	(24) 98
25) 15	(26) 17	(27) 19
28) 94	(29) 394	(30) 994

How far is the doubled number from zero?

How could you use this idea to halve a number? Try it!

## Exercise 4 – Dice Doubles with Two Digits

You need two different coloured decagon dice with 0 to 9 on them.

You need one or two partners.

What to do

- 1) Use your doubling strategies to double the numbers
- 2) Choose **one colour** for tens digit **and the other** for the ones digit. Toss the dice and say the number. First person to say the correct double wins.  
First to 5 wins the game.

Game Score Sheet		

## Exercise 5 – Dice Doubles with Three Digits

You need three different coloured decagon dice with 0 to 9 on them.

You need one or two partners.

What to do

- 1) Use your doubling strategies to double the numbers
- 2) Choose **one colour** for hundreds digit, **another colour** for the tens digit and **another colour** for the ones digit. Toss the dice and say the number. First person to say the correct double wins.  
First to 5 wins the game.

Game Score Sheet		

## Exercise 6 – Big Double Trouble

What to do

- 1) Use your doubling strategies to double these numbers
- 2) Do the problems in your head
- 4) Record the answers

- |         |          |          |
|---------|----------|----------|
| 1) 222  | (2) 244  | (3) 245  |
| 4) 322  | (5) 350  | (6) 375  |
| 7) 425  | (8) 450  | (9) 475  |
| 10) 500 | (11) 555 | (12) 590 |
| 13) 707 | (14) 207 | (15) 407 |
| 16) 667 | (17) 616 | (18) 166 |
| 19) 999 | (20) 919 | (21) 599 |
| 22) 888 | (23) 388 | (24) 688 |
| 25) 697 | (26) 679 | (27) 967 |
| 28) 976 | (29) 796 | (30) 769 |

What is your favourite doubling strategy?

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## Answers

### Exercise 1

1) 4	(2) 24	(3) 84
4) 6	(5) 46	(6) 68
7) 8	(8) 88	(9) 164
10) 10	(11) 130	(12) 250
13) 14	(14) 54	(15) 94
16) 12	(17) 72	(18) 112
19) 18	(20) 38	(21) 118
22) 16	(23) 76	(24) 136
25) 134	(26) 150	(27) 350
28) 186	(29) 190	(30) 198

### Exercise 2

1) 42	(2) 26	(3) 96
4) 64	(5) 48	(6) 78
7) 84	(8) 90	(9) 108
10) 106	(11) 138	(12) 308
13) 144	(14) 148	(15) 158
16) 128	(17) 74	(18) 110
19) 184	(20) 36	(21) 116
22) 166	(23) 78	(24) 126
25) 124	(26) 142	(27) 1150
28) 182	(29) 192	(30) 196

### Exercise 3

1) 44	(2) 52	(3) 56
4) 62	(5) 66	(6) 74
7) 28	(8) 86	(9) 90
10) 104	(11) 114	(12) 116
13) 122	(14) 142	(15) 162
16) 32	(17) 152	(18) 172
19) 154	(20) 174	(21) 194
22) 156	(23) 176	(24) 196
25) 30	(26) 34	(27) 38
28) 188	(29) 788	(30) 1988

### Exercise 6

1) 444	(2) 488	(3) 490
4) 644	(5) 700	(6) 750
7) 850	(8) 900	(9) 950
10) 1000	(11) 1110	(12) 1180
13) 1414	(14) 414	(15) 814
16) 1334	(17) 1232	(18) 332
19) 1998	(20) 1838	(21) 1198
22) 1776	(23) 776	(24) 1376
25) 1394	(26) 1358	(27) 1934
28) 1952	(29) 1592	(30) 1538