# Multiplicative thinking

# **Mental routine**

## Specific teaching focus

Consolidate doubling and halving strategies

Develop efficient multiplication mental strategies

Reinforce terminology related to multiplication eg factor, product, multiplier, divisible

# **Australian Curriculum Mathematics content descriptors**

Year 3—recall multiplication facts of two, three, five and ten and related division facts Year 4—recall multiplication facts up to 10 x 10 and related division facts

# Materials/Resource required

Laminated 1-100 square per student Whiteboard marker per student

### **Closed questions**

I am thinking of the first number on the board that has 2 and 5 as factors. What is it? I am thinking of the second last number on the board that has 5 as a factor. What is it? The product of my two numbers is 20. What are my two numbers? Circle the product of 5 eights.

### **Open questions**

My product has 3 factors. What might it be? My product is a square number. What might it be? My number is divisible by 2 and 7. What might it be?

#### Flip questions

Guess the secret product. Can you do it in under 6 questions? You need to ask yes/no type questions. You cannot ask the same type of question twice. You must eliminate all the possible answers before you name the solution.

Possible questions—is your product a multiple of 2? Is your product divisible by 5? Do the digits in your product add to 9? Is your product a prime number?

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

