## 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 $10 \times 10$ 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 |

