

# Linear Patterns

(1)

1	2
2	5
3	8
4	11
5	14
⋮	
20	59
⋮	
$n$	$3n-1$

(2)

1	5
2	7
3	9
4	11
5	13
⋮	
50	103
⋮	
$n$	$2n+3$

# Quadratic Patterns

(1)

1	1
2	4
3	9
4	16
5	25
...	...
n	$n^2$

(2)

1	0
2	1
3	4
4	9
5	16
...	...
n	$(n-1)^2$

(3)

1	2
2	6
3	12
4	20
5	30
6	42
n	$n(n+1)$

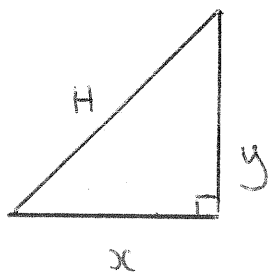
(4)

1	0
2	1
3	3
4	6
5	10
6	15
n	

Achievement standard 1.8

Right-Angled Triangles

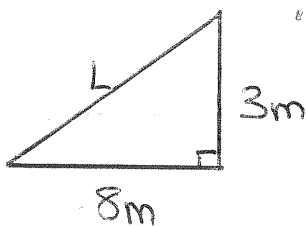
Pythagoras Theorem



$$H^2 = x^2 + y^2$$

Example:

i)



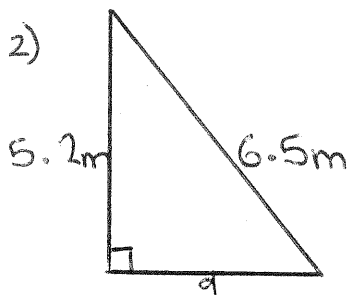
$$L^2 = 8^2 + 3^2$$

$$L^2 = 73$$

$$L = \sqrt{73}$$

$$L = 8.5 \text{ m (1dp)}$$

2)



$$6.5^2 = d^2 + 5.2^2$$

$$d^2 = 6.5^2 - 5.2^2$$

$$d^2 = 15.21$$

$$d = 3.9 \text{ m}$$