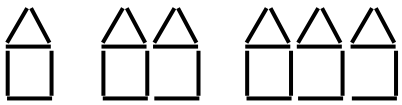
PATTERNS AND RELATIONSHIPS – SET 6

* *Note:* All of these below elements are interdependent on each other. Students should be provided one or two elements and be able to work out other sections from what has been elements.

(A) *Can interpret a question that contains a linear problem.*

Ella was given some matches to make a pattern, she used 6 matches to make 1 house, 11 matches to make 2 houses and 16 matches to make 3 houses, she has 116 matches all together how many houses can she make?

(B) *Can create, interpret and continue spatial sequential patterns (diagrams) to solve linear problems.*

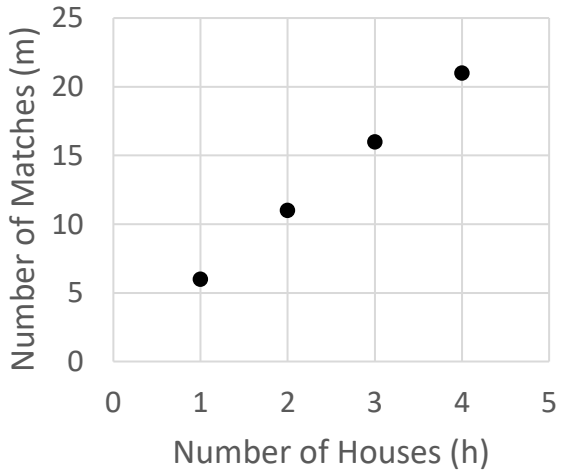


(C) *Can use tables to solve linear problems*

Number of houses (h)	Number of matches (m)
1	6
2	11
3	16
23	116

- Name each column
- Put a symbol to represent each column e.g. (h) and (m)
- Fill in both columns correctly
- Can work out numbers in both columns from a larger number in the opposite column.

(D) *Can create graphs to solve linear problems*



- Need numbers along both axis.
- Dots or crosses put in the correct place.
- Use dots or crosses when information is discrete. (things you count)
- Join the dots or crosses to create a line when information is indiscrete. (things you measure)

(E) *Can form equations to solve problems.*

m = 5h + 1

First work out the pattern 6 11 16 21

5 more each time +5 +5 +5

5 x each pattern increase (house) = *5x* or **5h**

How much for 0 (no houses) 6 – 5 = 1

Write as an equation y (for y axis) or m (for matches)

y = 5x + 1 or **m = 5h + 1**

Using this equation when (h) represents 23 houses.

m = 5 h + 1

m = (5 x 23) + 1

m = 116

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