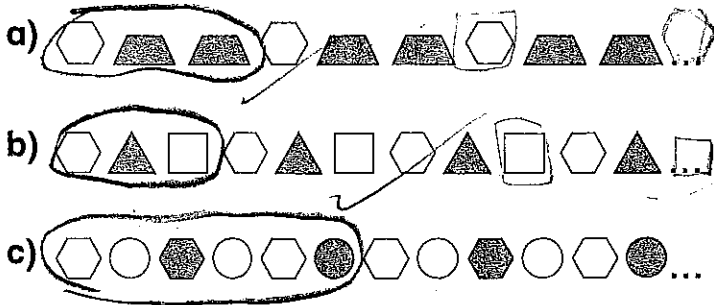


Patterns

Diagnostic Tool

1. Circle the core of the pattern.
(The core of a pattern is the smallest part of it that repeats.)



You will need

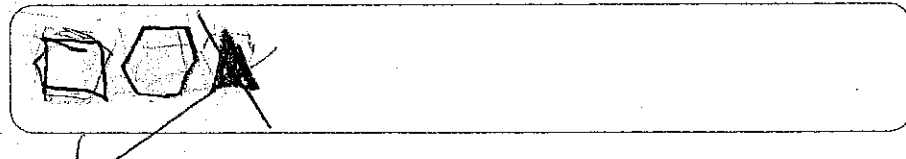
- coloured pencils
- a variety of shapes (e.g., pattern blocks, attribute blocks, square tiles)
- a 100 Chart (BLM 16, optional)
- base ten blocks (optional)

2. Describe how each attribute in the pattern for Question 1a) changes in the pattern.

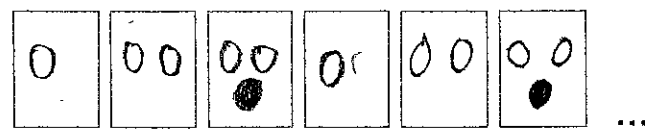
it was like hexagon, Trapezoid, Trapezoid and it Repeats

This describes the shape change. what about the colour?

3. Sketch the next 2 pictures in the pattern for Question 1b).



4. Draw dots in the 6 boxes below to show a repeating pattern. The number of dots should repeat in a different way than the colour of dots repeats.



the # of dots changes the same way as the colours

5. Continue each pattern.

a) 5, 9, 13, 17, 21, 25 by 4's

b) 412, 402, 392, 382, 372 by 10's

c) 76, 87, 98, 109, 119 by 11's
120

6. What might the 10th number be in each pattern?

a) 25, 35, 45, ...

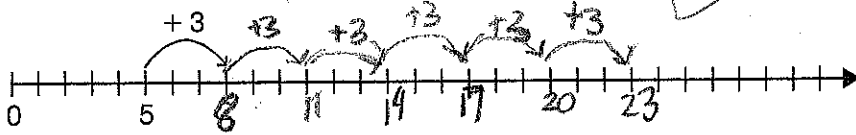
55

b) 80, 78, 76, ...

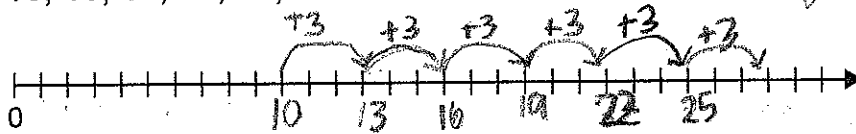
74

7. Model the pattern on the number line.

a) 5, 8, 11, 14, 17, ...



b) 10, 13, 16, 19, 22, ...



c) Tell how the 2 pattern models in parts a) and b) are alike. Tell how they are different.

the number line shows how the number skip by 1's, 2's, 3's, etc...

this is about how they are the same ways are they different?

8. Create 2 patterns that have 10 as the 4th number. One pattern should be a growing pattern. One should be a shrinking pattern. Write the first 5 numbers for each.

Pattern 1: 5, 10, 15, 20, 25 x

Pattern 2: 16, 14, 12, 10, 8, 6 ✓

9. Write the first 5 numbers in each pattern.

a) Start at 14 and go up by 2 each time.

14, 16, 18, 20, 22

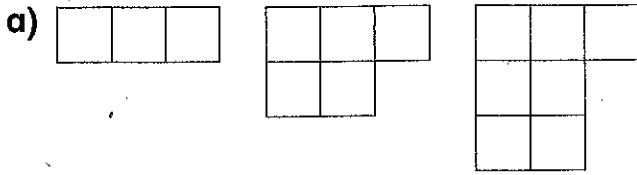
b) Start at 114 and go down by 3 each time.

114, 110, 108, 106

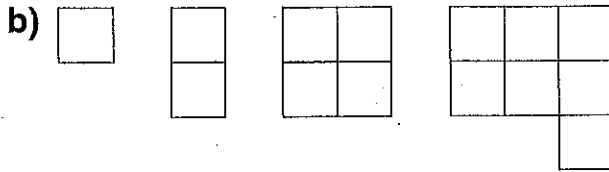
c) Start at 20 and go up by 2, then 3, then 4, ... (1 more each time).

20, 22, 25, 29, 34 ✓

10. A pattern rule tells how a pattern starts and how it continues. Write a pattern rule for the number of squares in each pattern.



Start at 3 and add 2 ✓



Start at 1 and add 2 ✗

11. Write a pattern rule for each pattern.

a) 7, 11, 15, 19, 23, ...

it goes 5, 6, 7, ...

b) 30, 28, 26, 24, ...

c) 4, 5, 7, 10, 14, 19, ...

it goes by 1, 2, 3, 4, 5

12. How are the rules for these patterns alike?
How are they different?

Pattern 1: 9, 12, 15, 18, 21, ...

Pattern 2: 8, 11, 14, 17, 20, ...

alike off by 1 ✓

different p2 is less than p1