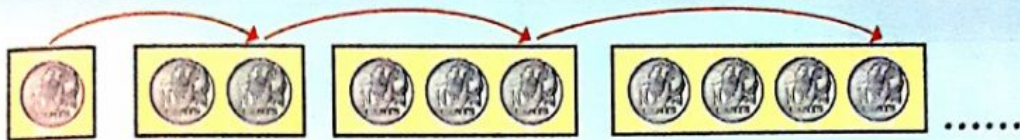


NUMBER PATTERNS

Look at this pattern with 10-cent coins.



- Do you see the pattern?
- Have you seen a **PATTERN RULE**?
- Can you tell what term comes next?
- Is this a **repeating**, **growing** or **decreasing** pattern?



OBSERVE!

- The **PATTERN RULE** is **"ADD 10¢"**
- The next term will be...



- This is a **GROWING** or **INCREASING PATTERN** because it is getting bigger.

- We can **EXTEND** the pattern to any number of terms.
- We can use the pattern rule to find:

» the **5th** term \longrightarrow **5** ten-cent coins

» the **10th** term \longrightarrow **10**  coins

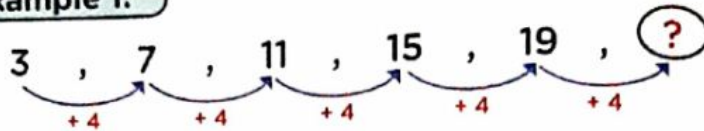
1. What is the **VALUE** of the 10-cent coins in the **20th** term?
Explain how you got your answer.



EXPLORING PATTERNS WITH THE FOUR OPERATIONS

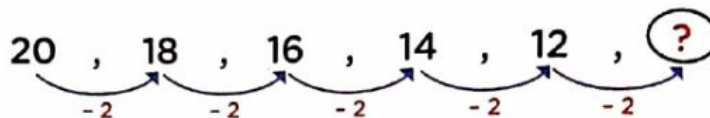
Look at the examples of the patterns.

Example 1:



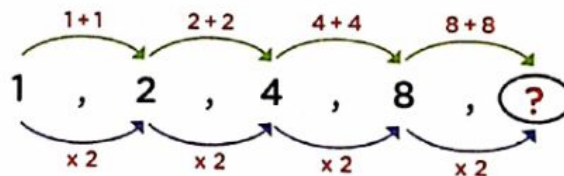
- The **PATTERN RULE** is**Add 4**.
- So the next term is19 **+ 4** = **23**

Example 2:



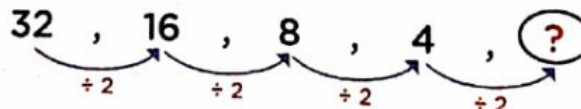
- The **PATTERN RULE** is**Subtract 2**.
- So the next term is12 **- 2** = **10**

Example 3:



- The **PATTERN RULE** is**Multiply by 2 ($\times 2$)**
or the pattern rule can also be: **Double the number before**.
- So the next term is8 **$\times 2$** = **16** OR 8 **+ 8** = **16**

Example 4:



- The **PATTERN RULE** is**Divide by 2 ($\div 2$)**
- So the next term is4 **$\div 2$** = **2**



EXERCISE 3.1Fill in the missing numbers and write the **PATTERN RULE** you used.

1. 1, 3, 5, 7, _____, _____

Pattern rule: _____

7. 54, 45, _____, 27, _____, _____

Pattern rule: _____

2. _____, 4, 8, 12, 16, _____, _____

Pattern rule: _____

8. 8 000, 7 000, _____, _____, 4 000

Pattern rule: _____

3. _____, 6, 9, 12, 15, _____, _____

Pattern rule: _____

9. _____, 3, 9, _____, 81

Pattern rule: _____

4. 30, 38, _____, 54, _____, _____

Pattern rule: _____

10. _____, 4, 8, 16, _____

Pattern rule: _____

5. 24, 22, _____, 18, _____, _____

Pattern rule: _____

11. 81, 27, 9, _____, _____

Pattern rule: _____

6. 100, 90, 80, _____, _____, _____

Pattern rule: _____

12. 64, 32, 16, _____, _____, _____

Pattern rule: _____

13. Rajendra feeds his baby alligator guppy fishes daily.
Each day he increases the number of fishes by 2.



1



3



5



7

.....

How many guppies will Rajendra feed his baby alligator
on the 7th day if he continues feeding his pet the same way?