

SEQUENCES

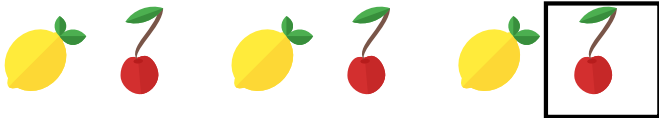
A PERIODIC SEQUENCE

A.1 FINDING THE NEXT SHAPE IN THE PATTERN 1-1

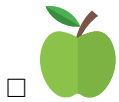
MCQ 1:



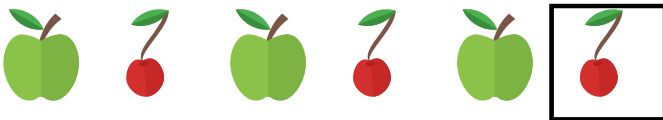
Answer:



MCQ 2:



Answer:



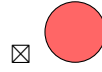
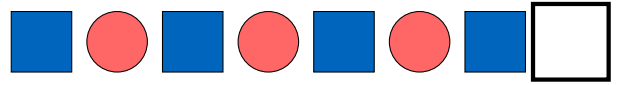
MCQ 3:



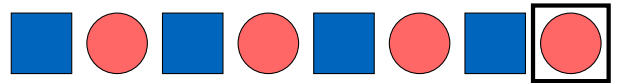
Answer:



MCQ 4:



Answer:



A.2 FINDING THE NEXT SHAPE IN THE PATTERN 1-1-1

MCQ 5:



Answer:



MCQ 6:



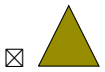
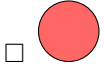
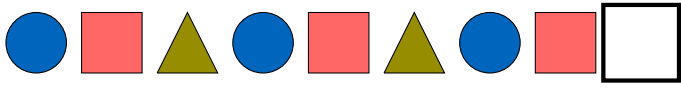
Answer:



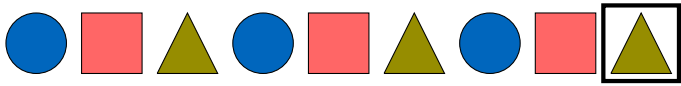
Answer:



MCQ 7:



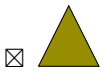
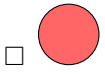
Answer:



MCQ 10:



MCQ 8:



Answer:



**A.3 FINDING THE NEXT SHAPE IN THE PATTERN
1-1-1-1**

MCQ 9:



MCQ 11:



Answer:



MCQ 12:



Answer:



A.4 FINDING THE NEXT SHAPE IN THE PATTERN 2-1

MCQ 13:



Answer:



MCQ 14:



Answer:



MCQ 15:



Answer:



MCQ 16:



Answer:



B NUMERICAL SEQUENCE

B.1 FINDING NEXT NUMBER

Ex 17:

$$0, 1, 2, 3, 4, \boxed{5}.$$

Answer:

$$\begin{array}{ccccccc} & +1 & +1 & +1 & +1 & & \\ & \curvearrowright & \curvearrowright & \curvearrowright & \curvearrowright & & \\ 1 & , & 2 & , & 3 & , & 4 & , & \boxed{5} \end{array}$$

Ex 18:

$$7, 6, 5, 4, \boxed{3}.$$

Answer:

$$\begin{array}{ccccccc} & -1 & -1 & -1 & -1 & & \\ & \curvearrowright & \curvearrowright & \curvearrowright & \curvearrowright & & \\ 7 & , & 6 & , & 5 & , & 4 & , & \boxed{3} \end{array}$$

Ex 19:

$$0, 2, 4, 6, \boxed{8}.$$

Answer:

$$\begin{array}{ccccccc} & +2 & +2 & +2 & +2 & & \\ & \curvearrowright & \curvearrowright & \curvearrowright & \curvearrowright & & \\ 0 & , & 2 & , & 4 & , & 6 & , & \boxed{8} \end{array}$$

Ex 20:

$$1, 3, 5, 7, \boxed{9}.$$

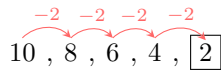
Answer:

$$\begin{array}{ccccccc} & +2 & +2 & +2 & +2 & & \\ & \curvearrowright & \curvearrowright & \curvearrowright & \curvearrowright & & \\ 1 & , & 3 & , & 5 & , & 7 & , & \boxed{9} \end{array}$$

Ex 21:

$$10, 8, 6, 4, \boxed{2}.$$

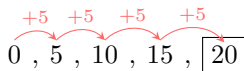
Answer:



Ex 22:

$$0, 5, 10, 15, \boxed{20}.$$

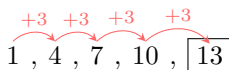
Answer:



Ex 23:

$$1, 4, 7, 10, \boxed{13}.$$

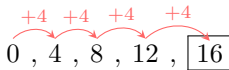
Answer:



Ex 24:

$$0, 4, 8, 12, \boxed{16}.$$

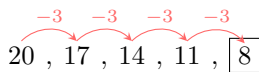
Answer:



Ex 25:

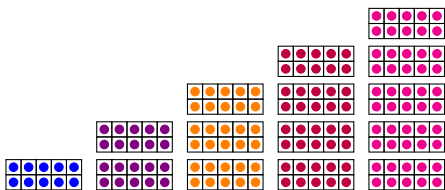
$$20, 17, 14, 11, \boxed{8}.$$

Answer:



B.2 FINDING NEXT NUMBER: +10 INCREASE

Ex 26: Each color group represents a step in the sequence.



How many circles will there be in the next step?

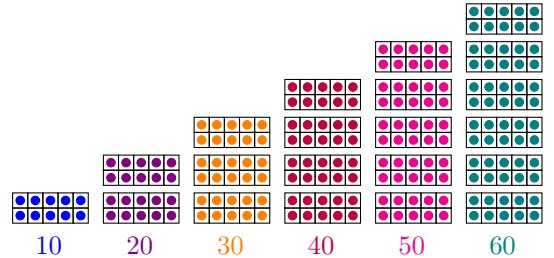
$$\boxed{60} \text{ circles.}$$

Answer:

- To find the total number of circles in the next step, observe how the number of circles increases in each group:

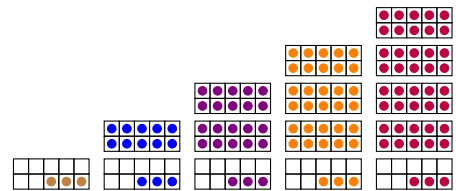
- Step 1: 10 circles (1 group of 10),
- Step 2: 20 circles (2 groups of 10),
- Step 3: 30 circles (3 groups of 10),
- Step 4: 40 circles (4 groups of 10),
- Step 5: 50 circles (5 groups of 10).

- The pattern shows that each step adds one more group of 10. The next step (step 6) will have 60 circles.



- The total number of circles in the next step is 60.

Ex 27: Each color group represents a step in the sequence.

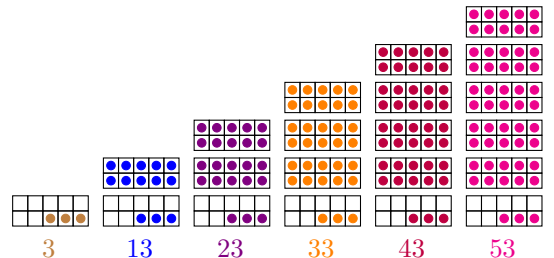


How many circles will there be in the next step?

$$\boxed{53} \text{ circles.}$$

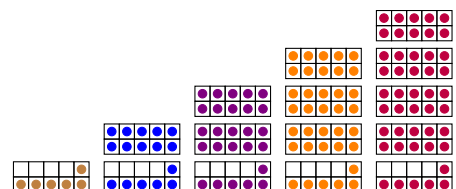
Answer:

- To find the total number of circles in the next step, observe how the number of circles increases in each group:
 - Step 1: 3 circles (initial group),
 - Step 2: 13 circles (1 group of 10 added to 3),
 - Step 3: 23 circles (2 groups of 10 added to 3),
 - Step 4: 33 circles (3 groups of 10 added to 3),
 - Step 5: 43 circles (4 groups of 10 added to 3).
- The pattern shows that each step adds one more group of 10. The next step (step 6) will have 53 circles.



- The total number of circles in the next step is 53.

Ex 28: Each color group represents a step in the sequence.

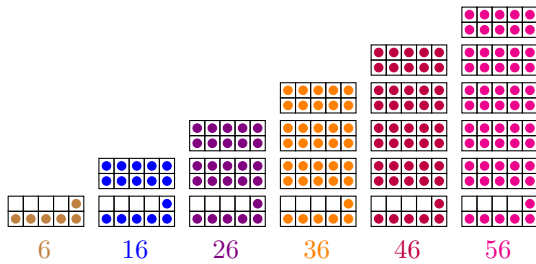


How many circles will there be in the next step?

56 circles.

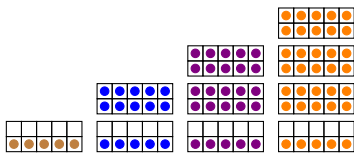
Answer:

- To find the total number of circles in the next step, observe how the number of circles increases in each group:
 - Step 1: 6 circles (initial group),
 - Step 2: 16 circles (1 group of 10 added to 6),
 - Step 3: 26 circles (2 groups of 10 added to 6),
 - Step 4: 36 circles (3 groups of 10 added to 6),
 - Step 5: 46 circles (4 groups of 10 added to 6).
- The pattern shows that each step adds one more group of 10. The next step (step 6) will have 56 circles.



- The total number of circles in the next step is 56.

Ex 29: Each color group represents a step in the sequence.

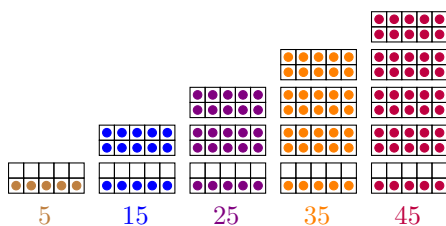


How many circles will there be in the next step?

45 circles.

Answer:

- To find the total number of circles in the next step, observe how the number of circles increases in each group:
 - Step 1: 5 circles (initial group),
 - Step 2: 15 circles (1 group of 10 added to 5),
 - Step 3: 25 circles (2 groups of 10 added to 5),
 - Step 4: 35 circles (3 groups of 10 added to 5).
- The pattern shows that each step adds one more group of 10. The next step (step 5) will have 45 circles.



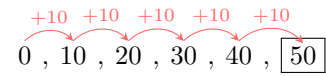
- The total number of circles in the next step is 45.

B.3 FINDING NEXT NUMBER: +10 INCREASE

Ex 30:

0, 10, 20, 30, 40, 50.

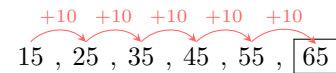
Answer:



Ex 31:

15, 25, 35, 45, 55, 65.

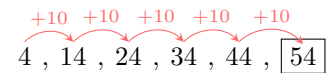
Answer:



Ex 32:

4, 14, 24, 34, 44, 54.

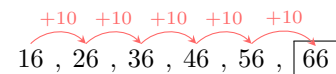
Answer:



Ex 33:

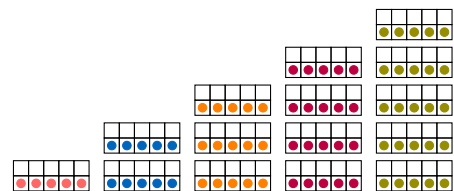
16, 26, 36, 46, 56, 66.

Answer:



B.4 FINDING NEXT NUMBER: +5 INCREASE

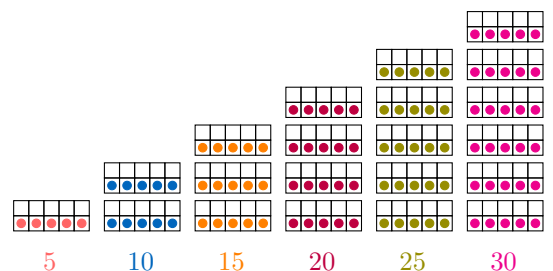
Ex 34: Each color group represents a step in the sequence.



How many circles will there be in the next step?

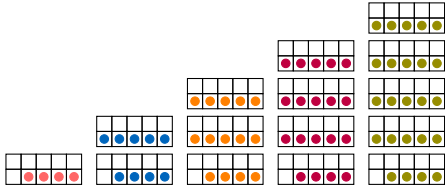
30 circles.

Answer:



- The total number of circles in the next step is 30.

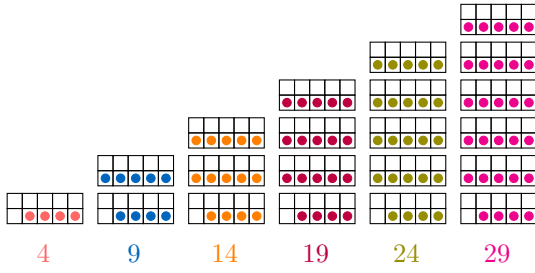
Ex 35: Each color group represents a step in the sequence.



How many circles will there be in the next step?

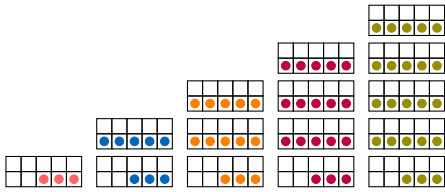
circles.

Answer:



- The total number of circles in the next step is 29.

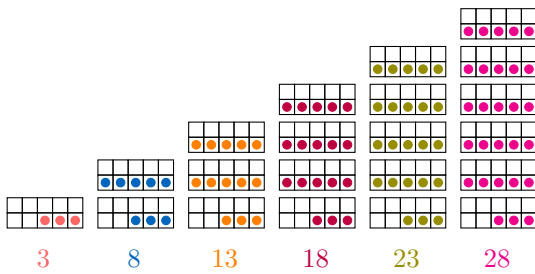
Ex 36: Each color group represents a step in the sequence.



How many circles will there be in the next step?

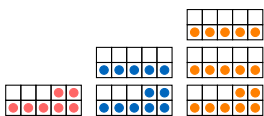
circles.

Answer:



- The total number of circles in the next step is 28.

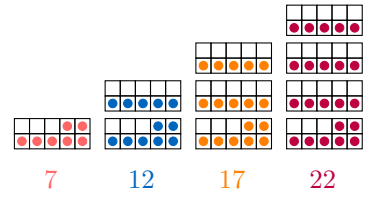
Ex 37: Each color group represents a step in the sequence.



How many circles will there be in the next step?

circles.

Answer:



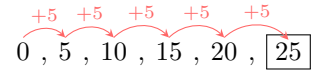
- The total number of circles in the next step is 22.

B.5 FINDING NEXT NUMBER: +5 INCREASE

Ex 38:

0, 5, 10, 15, 20, .

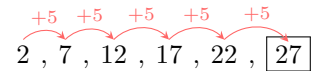
Answer:



Ex 39:

2, 7, 12, 17, 22, .

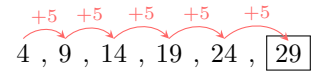
Answer:



Ex 40:

4, 9, 14, 19, 24, .

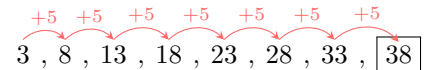
Answer:



Ex 41:

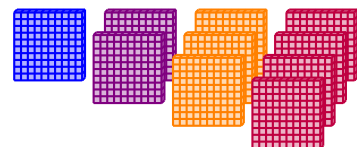
3, 8, 13, 18, 23, 28, 33, .

Answer:



B.6 FINDING NEXT NUMBER: +100 INCREASE

Ex 42: Each color group represents a step in the sequence.

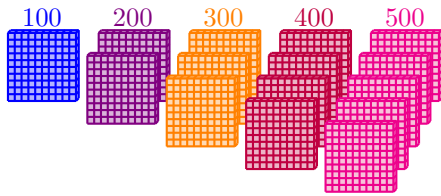


How many cubes will there be in the next step?

cubes.

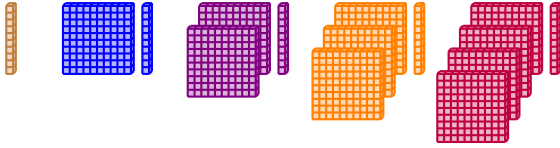
Answer:

B.7 FINDING NEXT NUMBER: +100 INCREASE



- The total number of cubes in the next step is 500.

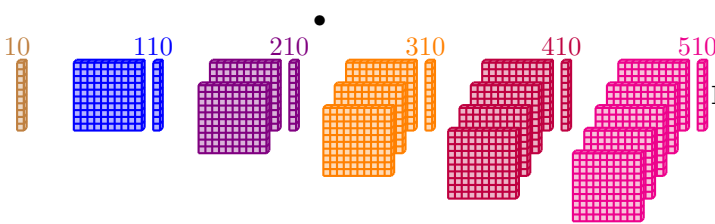
Ex 43: Each color group represents a step in the sequence.



How many cubes will there be in the next step?

cubes.

Answer:



- The total number of cubes in the next step is 510.

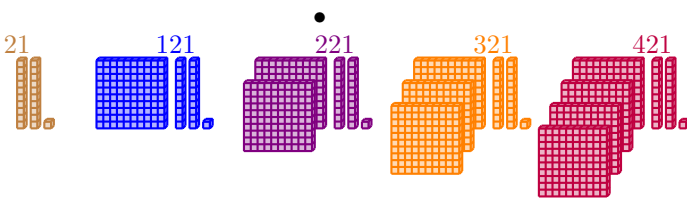
Ex 44: Each color group represents a step in the sequence.



How many cubes will there be in the next step?

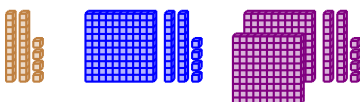
cubes.

Answer:



- The total number of cubes in the next step is 421.

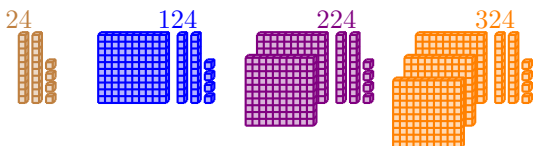
Ex 45: Each color group represents a step in the sequence.



How many cubes will there be in the next step?

cubes.

Answer:

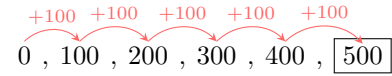


- The total number of cubes in the next step is 324.

Ex 46:

0, 100, 200, 300, 400, .

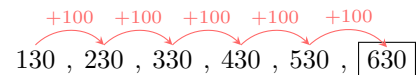
Answer:



Ex 47:

130, 230, 330, 430, 530, .

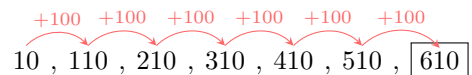
Answer:



Ex 48:

10, 110, 210, 310, 410, 510, .

Answer:



Ex 49:

186, 286, 386, 486, 586, .

Answer:

