

## CHAPTER-6 | ALGEBRA PLAY

QUIZ  
PART-01

1. If the original number is  $x$ , what is double of it?

- A.  $x + 2$   
B.  $2x$   
C.  $x/2$   
D.  $x - 2$  (B)

**Explanation:** Doubling  $x$  means multiplying it by 2.

2. In the trick, after doubling  $x$  and adding 4, the expression becomes:

- A.  $x + 4$   
B.  $2x - 4$   
C.  $2x + 4$   
D.  $x + 2$  (C)

**Explanation:** Double of  $x$  is  $2x$ , and adding 4 gives  $2x + 4$ .

3. What is the result of  $(2x + 4) \div 2$ ?

- A.  $x + 2$   
B.  $2x + 2$   
C.  $x + 4$   
D.  $2x$  (A)

**Explanation:** Dividing each term by 2 gives  $x + 2$ .

4. What happens when the original number  $x$  is subtracted from  $x + 2$ ?

- A. 0  
B. 1  
C. 2  
D.  $x$  (C)

**Explanation:**  $x + 2 - x = 2$ .

5. The final answer of the trick "double, add 4, divide by 2, subtract original number" is:

- A. 1  
B. 2  
C. 4  
D. 6 (B)

**Explanation:** The variable cancels out, so the result is always 2.

6. To make the final answer 3 using the same type of trick, what number should be added after doubling?

- A. 3  
B. 4  
C. 6  
D. 8 (C)

**Explanation:**  $2x + 6$  divided by 2 becomes  $x + 3$ , and subtracting  $x$  gives 3.

7. To make the final answer 5, what number should be added after doubling?

- A. 5  
B. 10  
C. 2  
D. 15 (B)

**Explanation:**  $2x + 10$  divided by 2 becomes  $x + 5$ , and subtracting  $x$  gives 5.

8. Why does the trick give the same final value every time?

- A. Because  $x$  becomes zero  
B. Because the original number cancels out  
C. Because every number is even  
D. Because division is not used (B)

**Explanation:** The  $x$  term is subtracted at the end, so only the constant remains.

9. In the assessment trick: add 4, multiply by 2, add 4, divide by 2, subtract original number. What is the final answer?

- A. 2  
B. 4  
C. 6  
D. 8 (C)

**Explanation:**  $x + 4$  becomes  $2x + 8$ , then  $2x + 12$ , then  $x + 6$ , and subtracting  $x$  gives 6.

10. Which algebraic idea is mainly used in these number tricks?

- A. Variables and cancellation  
B. Geometry  
C. Fractions only  
D. Measurement (A)

**Explanation:** The trick uses  $x$  for the unknown number, and  $x$  cancels out at the end.