

## POSITIVE NEGATIVE NUMBERS

1)

Given the statements:

$$a^3 \cdot b < 0$$

$$b^2 \cdot c > 0$$

Which of the following is always true?

- A)  $a \cdot b > 0$       B)  $a \cdot c > 0$       C)  $b > 0$   
D)  $b \cdot c < 0$       E)  $a^2 \cdot c > 0$

2)

Given that

$$a \cdot b^2 > 0$$

$$b^5 \cdot c > 0$$

$$a^3 \cdot c < 0$$

What are the signs of  $a$ ,  $b$ , and  $c$ , respectively?

- A)  $+, +, -$       B)  $+, -, +$       C)  $+, -, -$   
D)  $-, +, -$       E)  $+, +, +$

3)

Given that,

$$a < 0 < b < c$$

which of the following is definitely positive?

- A)  $(a - b) \cdot (b - c)$       B)  $(a + b) \cdot (b + c)$   
C)  $(a + c)(a - c)$       D)  $(a - c) \cdot c$   
E)  $(a + c) \cdot b$

4)

Given that,

$$a + b > 0$$

$$b - c < 0$$

which of the following is definitely true for  $a$ ,  $b$ , and  $c$ ?

- A) If  $a$  is a positive number, then  $b$  is negative.  
B) If  $a$  is a negative number, then  $c$  is positive.  
C) Both  $a$  and  $b$  are definitely positive numbers.  
D)  $c$  is definitely a positive number.  
E) If  $b$  is a negative number, then  $c$  is positive.

5)

Given that,

$$a < 0 < b < c$$

Which of the following is definitely negative?

- A)  $\frac{a+b}{b-c}$       B)  $\frac{a+c}{a-c}$       C)  $\frac{a+b}{c}$   
D)  $\frac{a-b}{b+c}$       E)  $\frac{b-c}{a}$

### ANSWER KEY

1	E
2	C
3	A
4	B
5	D