

# BALUNI SCHOOL OF COMPETITION



## Online Worksheet - 1 Class - 9<sup>th</sup> B Subject - MATHEMATICS

NAME: \_\_\_\_\_

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- Which of the following algebraic expression is a linear polynomial?
  - $3x$
  - $3x^2$
  - $3x^2 + 2$
  - $3x - \frac{1}{x}$
- Which of the following expressions stands for the area of the rectangle shown below (in appropriate sq. Units)?
  - $6x$
  - $6 + x$
  - $3x + 2$
  - $3(x + 2)$
- Zero of the polynomial  $p(x) = cx + d$  is:
  - $-d$
  - $-c$
  - $-\frac{d}{c}$
  - $\frac{d}{c}$
- If  $p(x) = (x - 2)^2 - (x + 2)^2$ , then:
  - The zeroes of  $p(x)$  are 2, -2.
  - The zeroes of  $p(x)$  are 0, 2, -2.
  - The zero of  $p(x)$  is 0.
  - $p(x)$  has no real zero.
- The polynomial  $q(z) = z^3 - 4z + a$  when divided by the polynomial  $(z - 3)$  leaves remainder 5. What is the value of  $a$ ?
  - 10
  - 3
  - 3
  - 10
- The remainder when  $x^3 + 3x^2 + 3x + 1$  is divided by  $x$  is:
  - 1
  - 1
  - $\frac{1}{2}$
  - 2
- Which of these is a factor of the polynomial  $p(x) = x^3 + 4x + 5$ ?
  - $(x - 1)$
  - $(x + 1)$

c)  $(x - 2)$

d)  $(x + 2)$

8. If  $(x - a)$  is a factor of  $x^3 - mx^2 - 2anx + na^2$ ;  $a \neq 0$ , then  $a =$

a)  $m+n$

b)  $m-n$

c)  $\frac{m}{n}$

d)  $Mn$

9. What is the common factor of  $x^3 - x$  &  $-22x^2 + 142x - 120$ ?

a)  $x$

b)  $x - 1$

c)  $x^2$

d)  $1$

10. If  $x^2 + kx + 6 = (x + 2)(x + 3)$ , for all  $x$ , then the value of  $k$  is:

a)  $1$

b)  $-1$

c)  $5$

d)  $3$

11. Give one example of binomial of degree 1 .

12. Find  $p(0)$  ,  $p(1)$ ,  $p(-2)$ , for the polynomial  $p(y) = (y + 2)(y - 2)(y + 3)$

13. Find the remainder when the polynomial  $x^4 + x^3 - 2x^2 + x + 5$  is divided by  $x - 1$ .