ST. LAWRENCE HIGH SCHOOL

CLASS 8
SUBJECT :Algebra andGeometryWork sheet22
Marks:15Factorisation
Date:15.5.2021

Answer all thefollowing questions(1×15=15)

1. The area of a rectangle is $x^2+9x+14$. What are the dimensions if x=2 ?

   (A)14 and 2

   (B) 18 and 2

   (C)9 and 4

   (D) 6 and 6

2. Factorise $3x^2-5x+2$

   (A) (3x-2)(x-1)

   (B) (x+2)(3x-1)

   (C) (3x+2)(x-1)

   (D) (x-2)(3x+1)

3. Factorize by splitting the middle term: $x^2+9x-22$

   (A) (x+11) (x-2)

(B) -(x+11) (x-2)

   (C) (x-11) (x-2)

   (D) (x+11) (x+2)

4. Factorise by splitting the middle term $2x^2-11x+12$

(A) (2x+3)(x+4)

(B) (x+3)(2x-4)

(C) (x-3)(2x-4)

(D) (2x-3)(x-4)

5. The volume of cuboid is given by the expression $x^3 + 2x^2 - x - 2$. The dimension of the cuboid for x = 5 is:

(A) 4×6×7

(B)2×3×4

(C) 5×6×7

(D)6×7×8

6. The second degree factors of $x^4 - 5x^2 - 24$ are

(A)$(x^2 -8) (x^2 + 3)$

(B)$-(x^2 -8) (x^2 + 3)$

(C)$(x^2 -8) (x^2 - 3)$

(D)$(x^2 +8) (x^2 + 3)$

7. What are the two factors of quadratic polynomial $x^2 - 16x + 64$?

(A) (x-16) and (x-64)

(B) (x+8) and (x-8)

(C) (x+16) and (x-4)

(D) (x-8) and (x-8)

8. Factorise the quadratic polynomial by splitting the middle term:
$x^2 + 14x + 45$

(A) (x+9) (x+5)

(B) (x-9) (x+5)

(C) (x+9) (x-5)

(D) -(x+9) (x+5)

9. Factorise the quadratic polynomial by splitting the middle term: $y^2 - 4y - 21$

(A) $(y - 7)(y - 3)$

(B) $(y - 7)(y + 3)$

(C) $(y + 7)(y - 3)$

(D) $(y + 7)(y + 3)$

10. What is the value of p if x-2 is a factor of $x^2 - 6x + p$?

(A) 4

(B) -4

(C) 8

(D) -8

11. The factors of $2p^2 - 11p + 12$ are

(A) $(p+4)(2p-3)$

(B) $(p-4)(2p-3)$

(C) $(p-4)(2p+3)$

(D) $(p-3)(2p-4)$

12. The factors of $6x^3 - 7x^2 - 5x$ are

(A) $x(3x-5)(2x+1)$

(B) $(3x-5)(2x+1)$

(C) $x(3x+5)(2x+1)$

(D) $x(3x-5)(2x-1)$

13. Which value of 'a' would make $x^2 - ax - 92$ factorable?

(A) 24

(B) 18

(C) 19

(D) 26

14.x-1 is a factor of which of the following?

(A) $x^2 - 2x+1$

(B) $x^2 - 2x-1$

(C) $x^2 + 2x+1$

(D) $x^2 + 2x-1$

15. $-4x^2-5x+6$ is equal to?

(A) $-(4x-3)(x+2)$

(B) $(4x-3)(x+2)$

(C) $-(4x+3)(x+2)$

(D) $-(4x-3)(x-2)$**Indranil Ghosh**