



Grade 10

Mathematics

Unit : Factors of Quadratic
Expression

Factorize the following expressions.

- 1) $a^2 + 6a + 8$
- 2) $a^2 - 7ab + 10b^2$
- 3) $n^2 + 10nx - 11x^2$
- 4) $c^2 - 7c + 12$
- 5) $y^4 + 4y^2 - 12$
- 6) $2a^2 + 3 + 1$
- 7) $6 + 17x + 5x^2$
- 8) $6x^2 + 13x + 5$
- 9) $8 + p - 7p^2$
- 10) $3x^3 - 14x^2 - 24x$
- 11) $6x^2 - x - 15$
- 12) $3x^2 - 30x - 72$
- 13) $(c + d)x - (c + d)y$
- 14) $a^2 + ab + ac + bc$
- 15) $y^3 - y^2 + y - 1$
- 16) $a^2 - 1$
- 17) $3p^2 - 98$
- 18) $ax^2 - 9ay^2$
- 19) $50a^5 - 8a^3b^2$
- 20) $4x^2 - (y - 2)^2$
- 21) $(a + b)^2 - (a - 2b)^2$
- 22) $69^2 - 31^2$
- 23) $(a + b)^2 - c^2$
- 24) $a^3 - ab^2$
- 25) $15y^2 - 77y + 10$

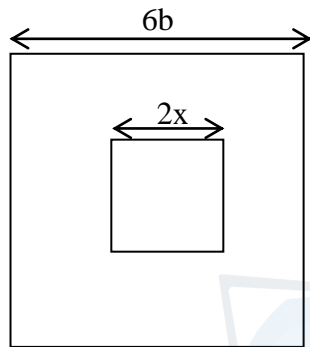


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Part II

- 1) $x^2 + x - 72$ can be obtained by the product of two expressions by adding a certain number to x and by subtracting a number from x .
- Find the factors of the above expression.
 - What is the number added to x ?
 - What is the number subtracted from x ?

2)



Given figure shows 2 squares with side length $6b$ and $2x$.

- Find the area of the large square in terms of b .
- Find the area of the small square in terms of x .
- Show that the difference of the areas of 2 squares can be written as $(6b + 2x)(6b - 2x)$.