

91. Using the Difference of Two Squares to Factorise

Practice Questions

1. Factorise $x^2 - 9$.
2. Factorise $x^2 - 25$.
3. Factorise $4x^2 - 16$.
4. Factorise $x^2 - 49$.
5. Factorise $9x^2 - 4$.
6. Factorise $x^2 - 64$.
7. Factorise $16x^2 - 81$.
8. Factorise $x^2 - 121$.
9. Factorise $25x^2 - 36$.
10. Factorise $x^2 - 1$.

Scenario Questions

1. A square garden has an area of $x^2 - 9$ square meters. Find the possible side lengths.
2. A carpenter cuts a square hole from a larger square, leaving an area of $x^2 - 25$ cm². Find the possible dimensions.
3. A metal sheet has an area of $4x^2 - 16$ cm² after a square is cut from it. Find possible side lengths.
4. The area of a frame is $x^2 - 49$ cm². Find its possible dimensions.
5. A design has an area of $9x^2 - 4$. Find the possible dimensions.
6. A plot of land has an area of $x^2 - 64$ square meters. Find two possible lengths.
7. A factory cuts a square hole from a large metal plate, leaving an area of $16x^2 - 81$ cm². What are the possible dimensions?
8. A city square has an area of $x^2 - 121$ square meters. Find its possible side lengths.
9. A shop floor's tiling pattern has an area of $25x^2 - 36$. Factorise to find possible lengths.
10. A door panel has a decorative cut-out with an area of $x^2 - 1$. Find the possible dimensions.

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Practice Questions

1. $(x + 3)(x - 3)$
2. $(x + 5)(x - 5)$
3. $4(x + 2)(x - 2)$
4. $(x + 7)(x - 7)$
5. $(3x + 2)(3x - 2)$
6. $(x + 8)(x - 8)$
7. $(4x + 9)(4x - 9)$
8. $(x + 11)(x - 11)$
9. $(5x + 6)(5x - 6)$
10. $(x + 1)(x - 1)$

Scenario Questions

1. Side lengths: $x + 3$ and $x - 3$
2. Dimensions: $x + 5$ and $x - 5$
3. Side lengths: $2(x + 2)$ and $2(x - 2)$
4. Dimensions: $x + 7$ and $x - 7$
5. Dimensions: $3x + 2$ and $3x - 2$
6. Lengths: $x + 8$ and $x - 8$
7. Dimensions: $4x + 9$ and $4x - 9$
8. Side lengths: $x + 11$ and $x - 11$
9. Lengths: $5x + 6$ and $5x - 6$
10. Dimensions: $x + 1$ and $x - 1$