



MATHS

NCERT - NCERT

MATHEMATICS(HINGLISH)

NCERT THEOREMS

Theorem 1 1

1. Theorem 1.1 (Euclid's Division Lemma) : Given positive integers a and b , there exist unique

integers q and r satisfying $a = bq + r$, $0 \leq r \leq$

b .



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Theorem 1.2

1. Theorem 1.2 (Fundamental Theorem of Arithmetic) : Every composite number can be expressed (factorised) as a product of primes, and this factorisation is unique, apart from the order in which the prime factors occur.



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Theorem 1 3

1. Theorem 1.3 : Let p be a prime number. If p divides a^2 , then p divides a , where a is a positive integer.



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Theorem 6 1

1. Theorem 6.1 : If a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, the other two sides are divided in the same ratio.



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2. Theorem 6.2 : If a line divides any two sides of a triangle in the same ratio, then the line is parallel to the third side.



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3. Theorem 6.3 : If in two triangles, corresponding angles are equal, then their corresponding sides are in the same ratio (or proportion) and hence the two triangles are similar.



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4. Theorem 6.4 : If in two triangles, sides of one triangle are proportional to (i.e., in the same ratio of) the sides of the other triangle,

then their corresponding angles are equal and hence the two triangles are similar



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5. Theorem 6.5 : If one angle of a triangle is equal to one angle of the other triangle and the sides including these angles are proportional, then the two triangles are similar.



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6. Theorem 6.6 : The ratio of the areas of two similar triangles is equal to the square of the ratio of their corresponding sides.



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7. Theorem 6.7 : If a perpendicular is drawn from the vertex of the right angle of a right triangle to the hypotenuse then triangles on both sides of the perpendicular are similar to the whole triangle and to each other.



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8. Theorem 6.8 : In a right triangle, the square of the hypotenuse is equal to the sum of the squares of the other two sides.



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9. Theorem 6.9 : In a triangle, if square of one side is equal to the sum of the squares of the other two sides, then the angle opposite the first side is a right angle.



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Theorem 10 1

1. Theorem 10.1 : The tangent at any point of a circle is perpendicular to the radius through the point of contact.



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2. Theorem 10.2 : The lengths of tangents drawn from an external point to a circle are equal.



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