

Properties of A Trapezoid, Midsegment of A Trapezoid, and Proving an Isosceles Trapezoid

Lesson 083 | Geometry | Trapezoid midsegments and proof

<https://www.youtube.com/watch?v=zXDOejm5XJw>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

An isosceles trapezoid has bases 6 and 30, and legs 18. Find the midsegment and explain why its base angles are congruent.

02

An isosceles trapezoid has bases 12 and 18, and legs 5. Find the midsegment and explain why its base angles are congruent.

03

An isosceles trapezoid has bases 10 and 30, and legs 12. Find the midsegment and explain why its base angles are congruent.

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04

An isosceles trapezoid has bases 24 and 28, and legs 13. Find the midsegment and explain why its base angles are congruent.

05

An isosceles trapezoid has bases 16 and 38, and legs 18. Find the midsegment and explain why its base angles are congruent.

06

An isosceles trapezoid has bases 10 and 14, and legs 9. Find the midsegment and explain why its base angles are congruent.

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- 01** An isosceles trapezoid has bases 6 and 30, and legs 18. Find the midsegment and explain why its base angles are congruent.

Midsegment is the average of bases: 18. Dropping perpendicular heights creates two right triangles whose hypotenuses are equal legs and whose heights are equal; HL gives congruence, then corresponding base angles are congruent.

- 02** An isosceles trapezoid has bases 12 and 18, and legs 5. Find the midsegment and explain why its base angles are congruent.

Midsegment is the average of bases: 15. Dropping perpendicular heights creates two right triangles whose hypotenuses are equal legs and whose heights are equal; HL gives congruence, then corresponding base angles are congruent.

- 03** An isosceles trapezoid has bases 10 and 30, and legs 12. Find the midsegment and explain why its base angles are congruent.

Midsegment is the average of bases: 20. Dropping perpendicular heights creates two right triangles whose hypotenuses are equal legs and whose heights are equal; HL gives congruence, then corresponding base angles are congruent.

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04

An isosceles trapezoid has bases 24 and 28, and legs 13. Find the midsegment and explain why its base angles are congruent.

Midsegment is the average of bases: 26. Dropping perpendicular heights creates two right triangles whose hypotenuses are equal legs and whose heights are equal; HL gives congruence, then corresponding base angles are congruent.

05

An isosceles trapezoid has bases 16 and 38, and legs 18. Find the midsegment and explain why its base angles are congruent.

Midsegment is the average of bases: 27. Dropping perpendicular heights creates two right triangles whose hypotenuses are equal legs and whose heights are equal; HL gives congruence, then corresponding base angles are congruent.

06

An isosceles trapezoid has bases 10 and 14, and legs 9. Find the midsegment and explain why its base angles are congruent.

Midsegment is the average of bases: 12. Dropping perpendicular heights creates two right triangles whose hypotenuses are equal legs and whose heights are equal; HL gives congruence, then corresponding base angles are congruent.