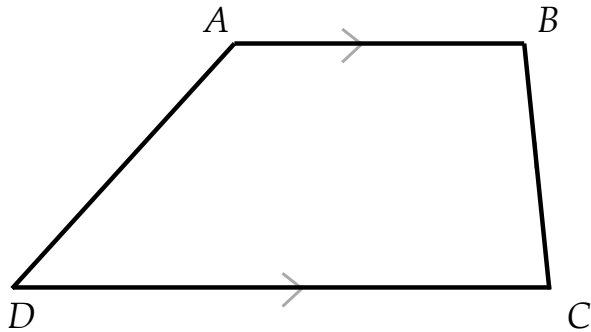# Properties of Isosceles Trapezoids

Trapezoid

A trapezoid is quadrilateral with exactly one pair of parallel sides.
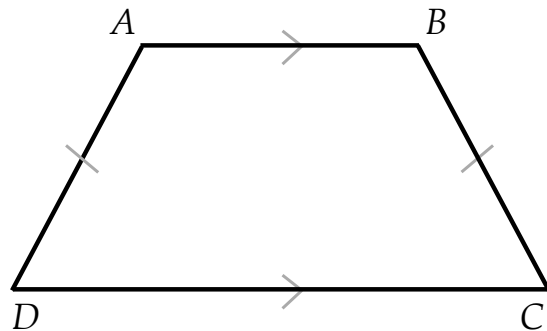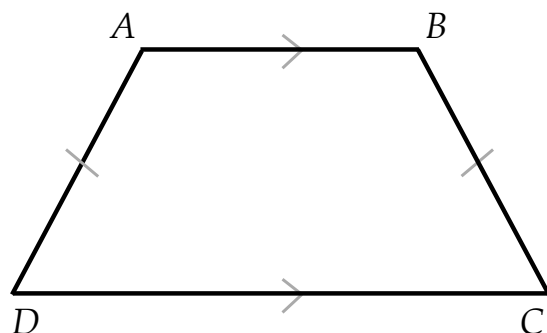
The parallel sides are called the bases.

The nonparallel sides are called the legs.

Isosceles Trapezoid

A trapezoid whose two legs are congruent

The parallel sides are called the bases.

The nonparallel sides are called the legs.

Isosceles Trapezoid

A trapezoid whose two legs are congruent
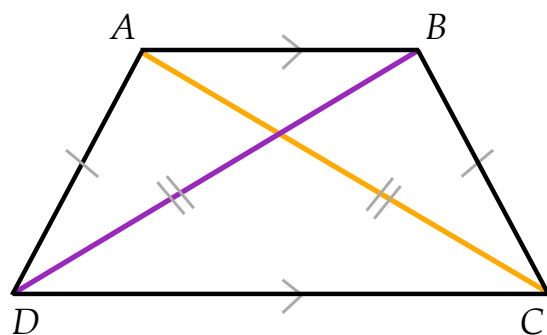
Both pairs of base angles are congruent
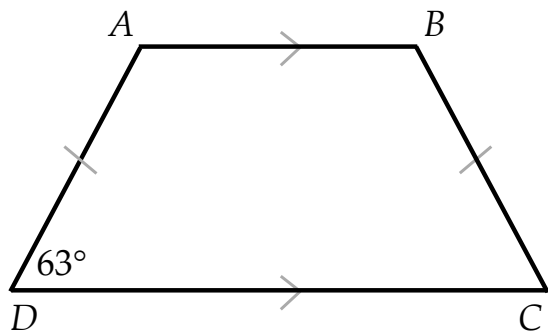
Base Angle Pairs

Angles that share a base

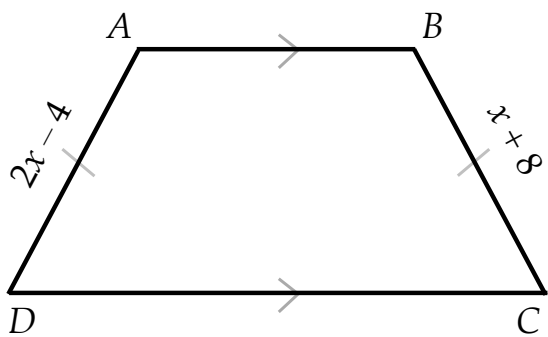# Isosceles Trapezoid

A trapezoid whose two legs are congruent
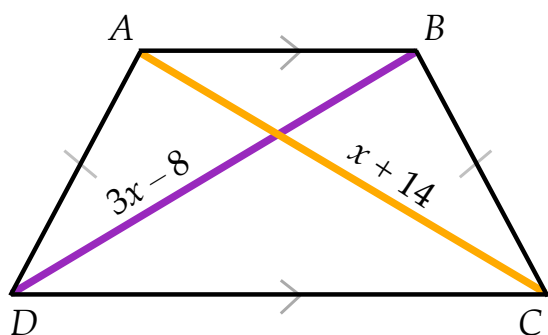
The diagonals of an isosceles trapezoid are congruent

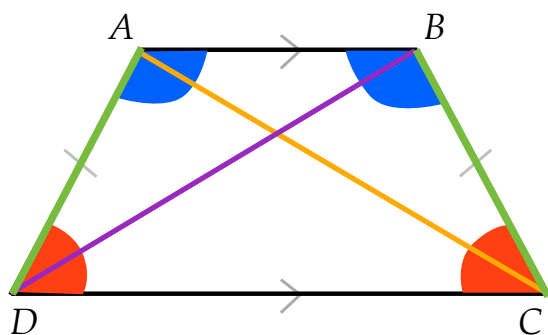Determine the measure of each angle of the following isosceles trapezoid

A   B

63°

D   C

Determine the measure of each leg of the following isosceles trapezoid

A   B

$2x - 4$

$8 + x$

D   C

Properties of Isosceles Trapezoids

Determine the measure of each diagonal of the following isosceles trapezoid

Isosceles Trapezoid

Two legs are congruent

$$\overline{AD} \cong \overline{BC}$$

Both pairs of base angles are congruent

$$\angle A \cong \angle B \qquad \angle D \cong \angle C$$

The diagonals are congruent

$$\overline{DB} \cong \overline{AC}$$

Properties of Isosceles Trapezoids