

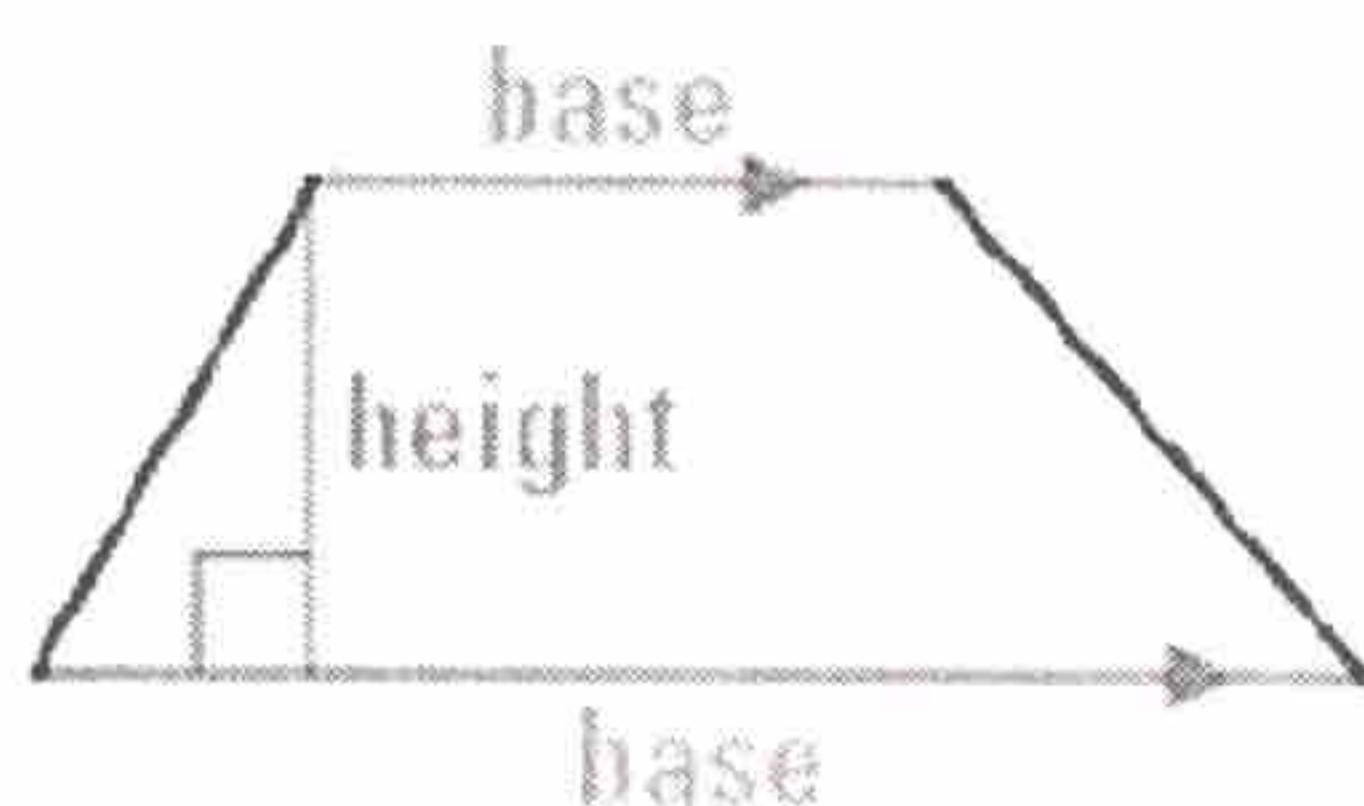
11.2 Areas of Trapezoids, Rhombuses, and Kites

height of a trapezoid - perpendicular distance between its bases

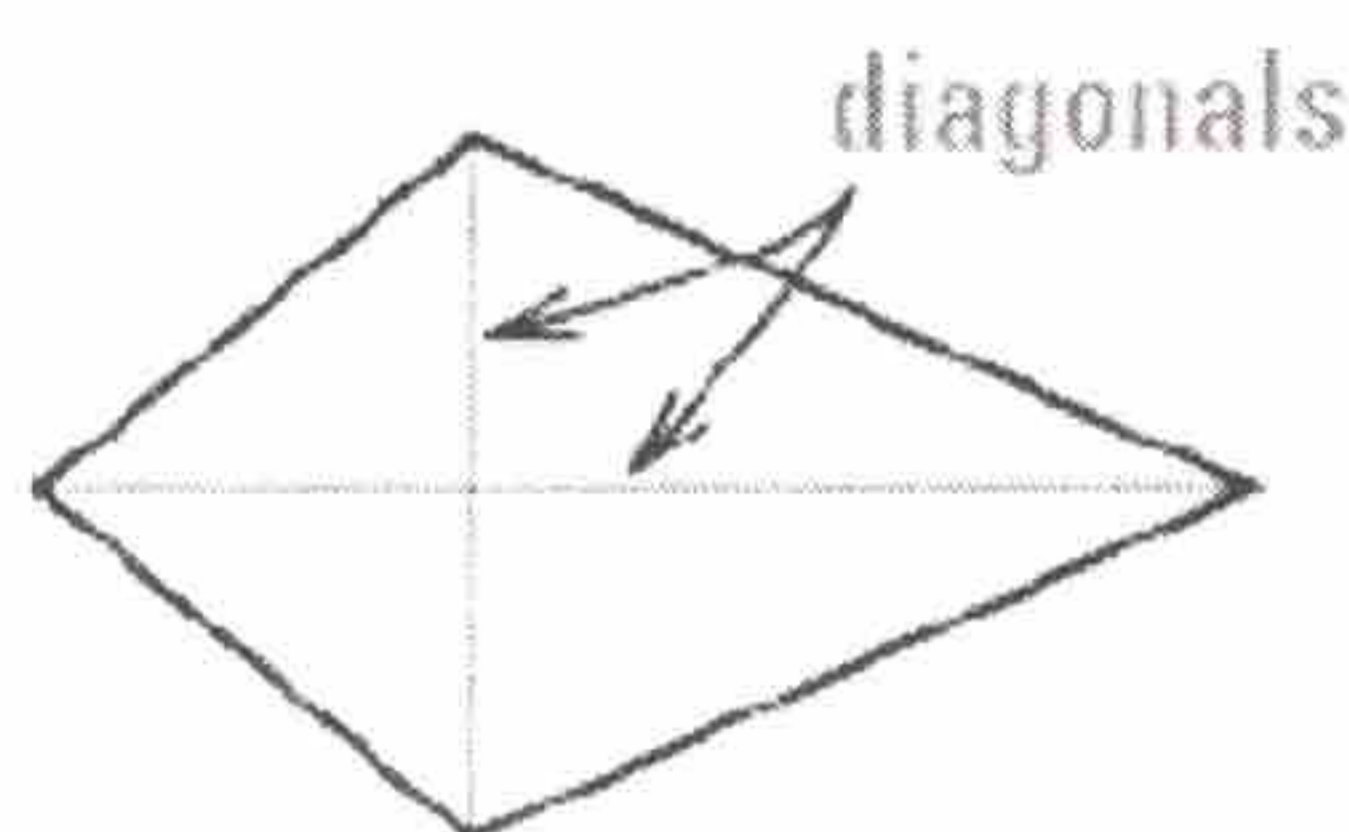
* the diagonals of a rhombus bisect each other *

* the diagonals of a kite are perpendicular but only one is bisected *

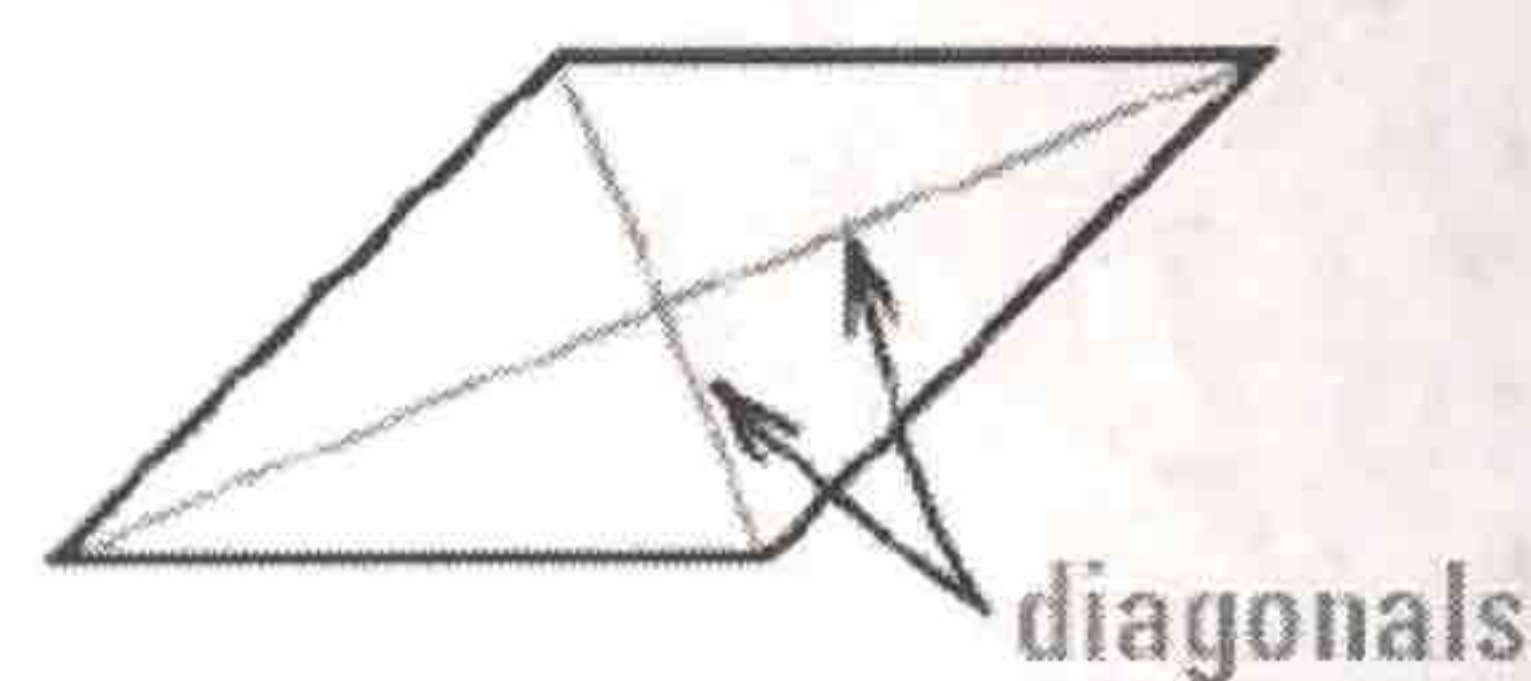
Trapezoid



Kite



Rhombus



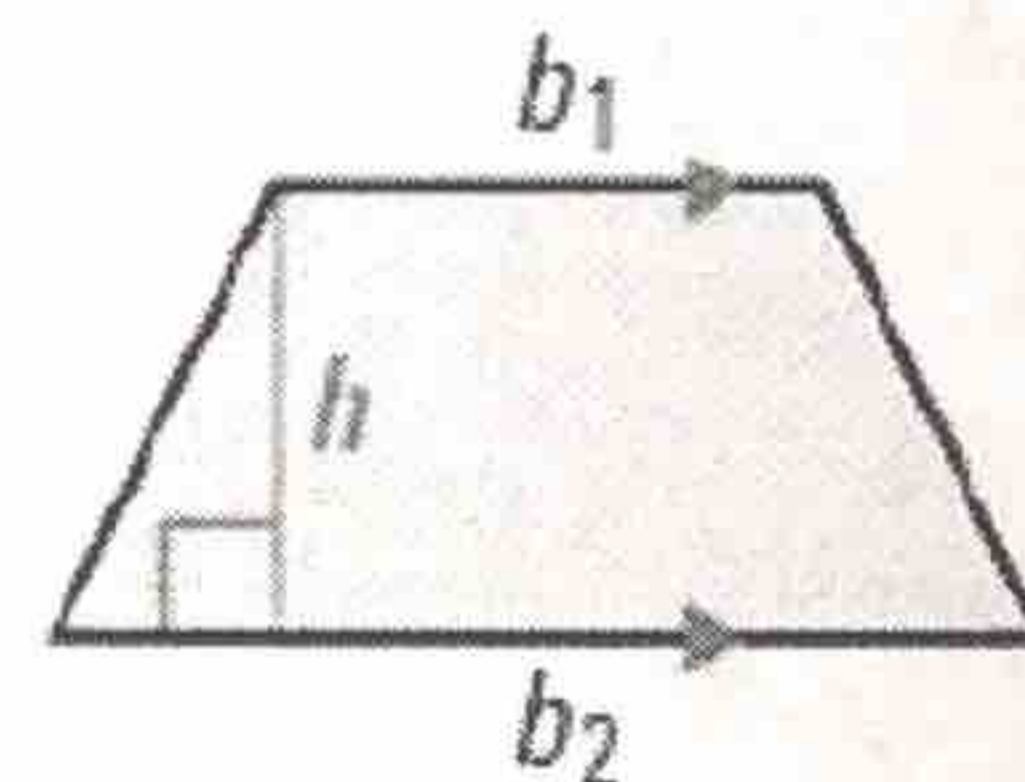
THEOREM

For Your Notebook

THEOREM 11.4 Area of a Trapezoid

The area of a trapezoid is one half the product of the height and the sum of the lengths of the bases.

Proof: Ex. 40, p. 736



$$A = \frac{1}{2}h(b_1 + b_2)$$

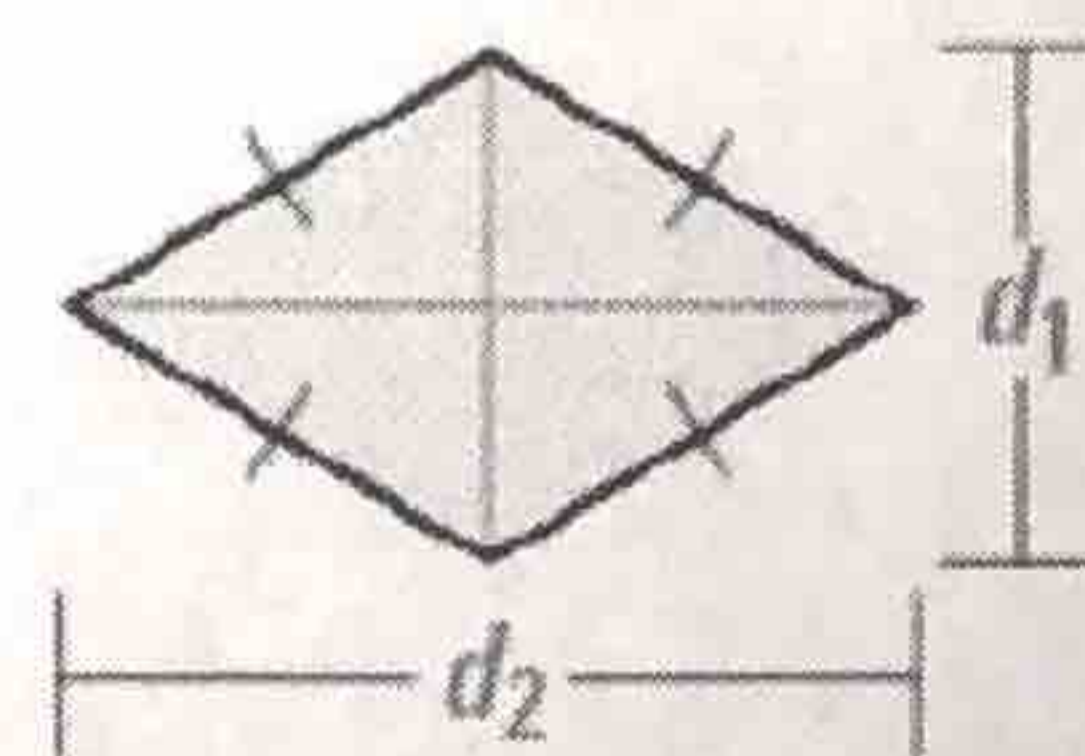
THEOREMS

For Your Notebook

THEOREM 11.5 Area of a Rhombus

The area of a rhombus is one half the product of the lengths of its diagonals.

Justification: Ex. 39, p. 735

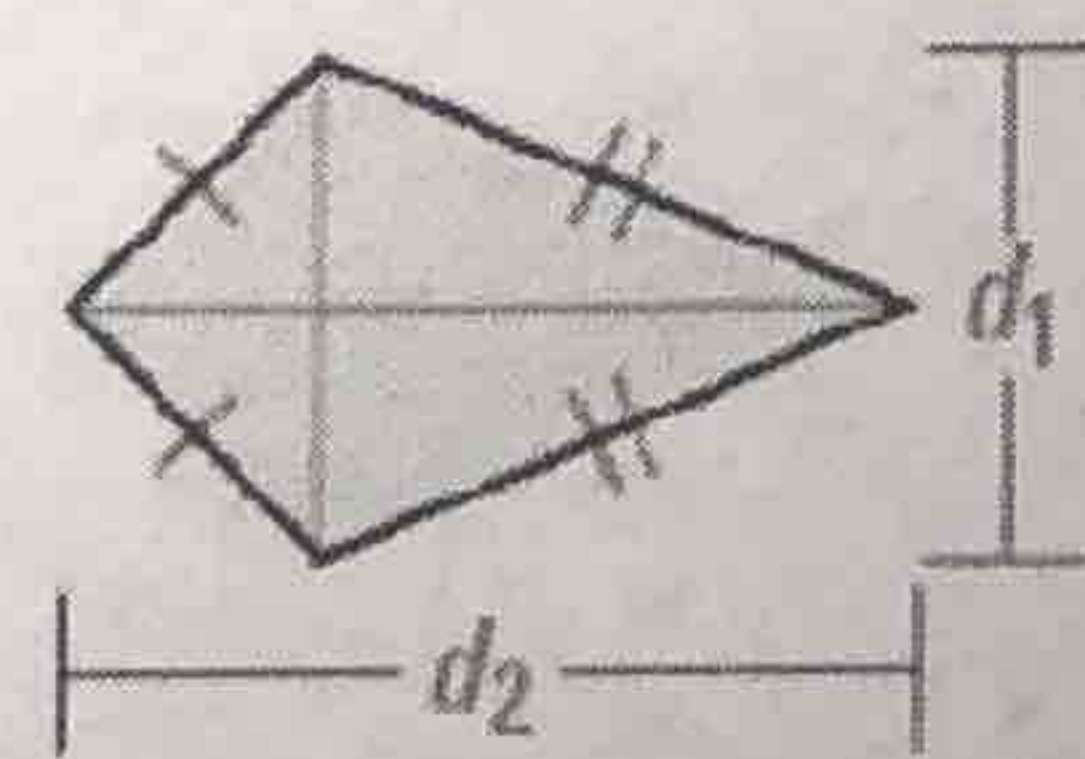


$$A = \frac{1}{2}d_1d_2$$

THEOREM 11.6 Area of a Kite

The area of a kite is one half the product of the lengths of its diagonals.

Proof: Ex. 41, p. 736



$$A = \frac{1}{2}d_1d_2$$