





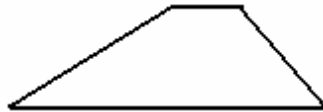
To me a parallelogram is....


Rachelle  & Amber  are trying to figure out a good definition for a parallelogram.


 : I think a parallelogram is a quadrilateral that has a pair of opposite parallel sides.

 : That is a property of a parallelogram, but I don't think that is a good definition because a trapezoid has two parallel sides and is not a parallelogram.

see 





 : I think a parallelogram is a quadrilateral that has a pair of equal opposite angles.

 : I think that is also just a property of a parallelogram, but not a definition because a kite fits that description, but it is not a parallelogram.

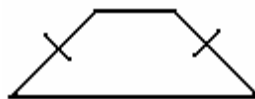




 : I think a parallelogram is a quadrilateral that has a pair of equal opposite sides.

 : I agree that is another property, but won't work as a definition, because isosceles trapezoids have a pair of equal opposite sides and are not parallelograms.





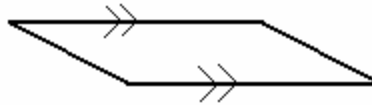
by Carrie Duncan



: I think if you combine some of the properties they might make up a definition. A parallelogram is a quadrilateral that has a pair of equal opposite parallel sides.



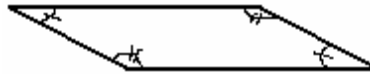
: I think your right it works.



: I think we could make your angle property work also. If you say that a parallelogm is a quadrilateral with 2 pairs of equal opposite angles.



: I think your right it works.



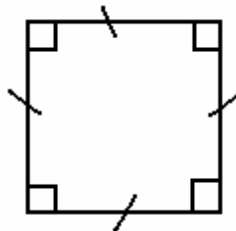
: There are other shapes that also fit these descriptions, like the square and rectangle, does that mean that they are also parallelograms?



: Yes, they are considered special cases of parallelograms, because they fit all the definitions of a parallelogram and have even more specific properties of their own. Like a soccer ball is a special case of a ball, because a soccer ball is a specific type of ball and soccer balls are always balls, but not all balls are soccer balls.

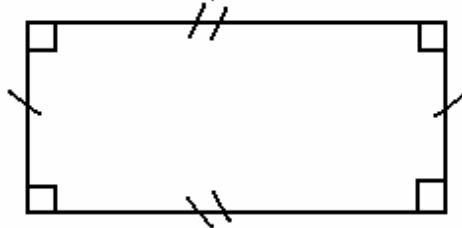


: A square has 2 pairs of equal opposite sides and a pair of equal opposite parallel sides, making it a parallelogram. In a square all 4 of the angles are 90o, and all four sides are equal in length.





: Oh, I see and a rectangle has equal opposite angles and two pair of equal opposite angles and two pair of equal opposite parallel sides. It also has 4 90° angles.



: Right. I wonder if there are any other special cases of a parallelogram.



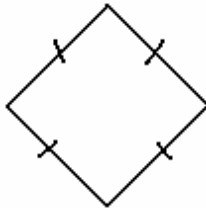
: I think there is another one. I think a rhombus is also a special case of a parallelogram.



: What is a rhombus?



: A rhombus is a quadrilateral that has 2 pairs of equal opposite angles and 2 pairs of equal opposite sides with all 4 sides being the same length, the sides length are the special case.




: Now that we've mentioned the special cases of a parallelogram, I wonder what shapes would be considered more general than a parallelogram.

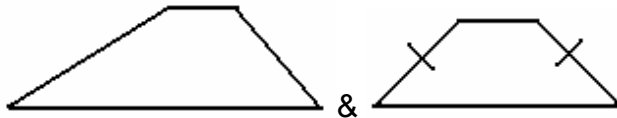


: I think the trapezoid and the isocetes trapezoid are both more general than a parallelogram. Like a toy is more general than a doll, because toys are not all dolls, but dolls can be toys.



: Your right they both fit part of the definition, but not the whole thing. For example the trapezoid and isoceses trapezoid both have one pair of opposite

parallel sides, but they are not equal.  : Right.



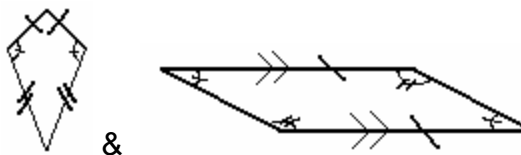
: Where does a kite fit in? Is it more specific than or more general than a parallelogram?



: Kites are not either, they can not be a parallelogram and parallelograms can not be kites.



: Kites have equal adjacent sides and only one pair of equal opposite angles. While parallelograms have equal parallel opposite sides and two pairs of equal opposite angles.



: Well thank you for helping figure out what a parallelogram is.



: Its been fun we'll have to do it again some time. Bye.