

What's Going On?

Checking In

Minds on

Aquayo

Action!

Quadrilateral Investigations

Consolidation

Exit Question

Learning Goal - I will explore the properties of Midpoints and Diagonals in Quadrilaterals.

Checking In

Test on Wednesday

Unit 6: Geometric Relationships

Topic #5

Midpoints and Diagonals in Quadrilaterals

Action!

Quadrilateral Investigations

1. Draw a large quadrilateral
- NO squares or rectangles!
2. Find the midpoints of each side.
3. Connect the midpoints to form another quadrilateral inside the original.

Action!

Quadrilateral Investigations

What do you notice?

Action!

Quadrilateral Investigations

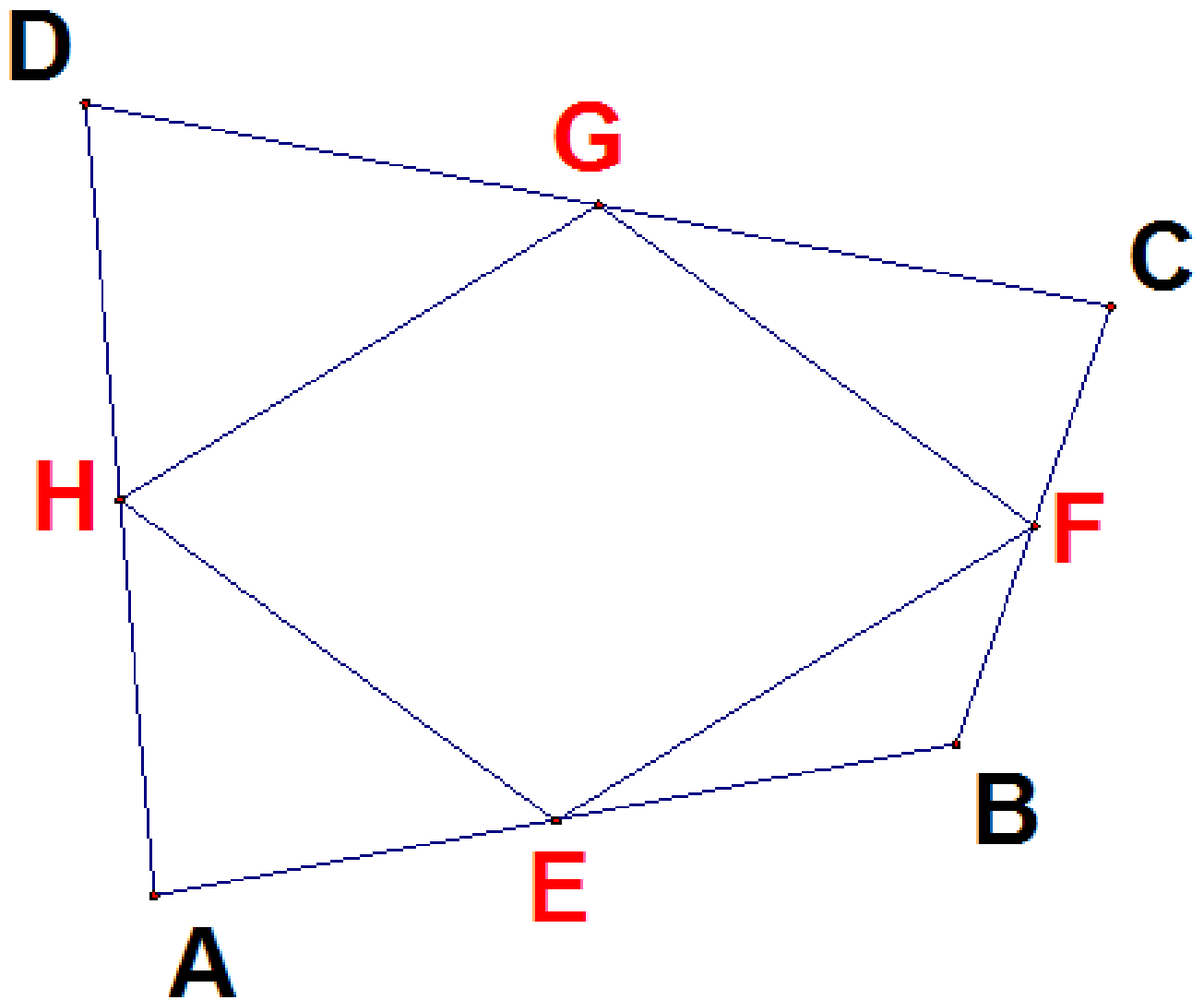
Joining the midpoints of the

sides of any quadrilateral

produces a parallelogram

with half the area

of the original quadrilateral.



Action!

Quadrilateral Investigations

Now, connect the opposite vertices of your interior parallelogram.

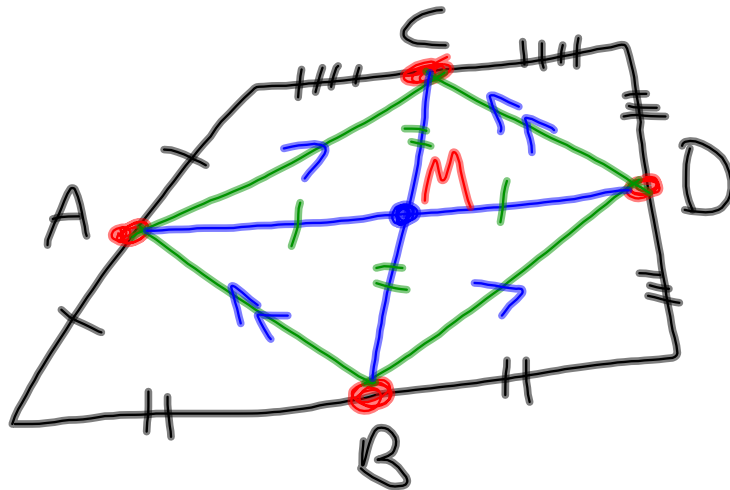
Call the point where the diagonals meet M .

Measure AM , CM , BM and DM .

Action!

Quadrilateral Investigations

What do you notice?



$$AM = DM$$

$$BM = CM$$

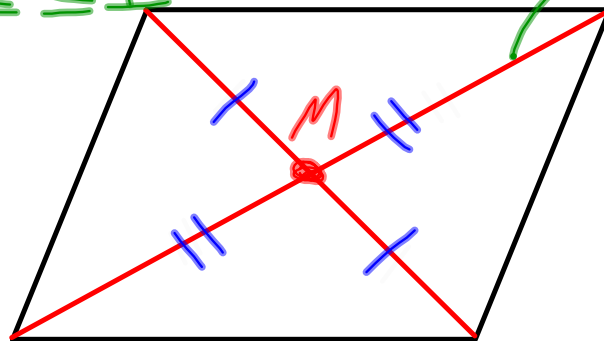
Action!

Quadrilateral Investigations

The diagonals of a parallelogram

cut in half
bisect each other.

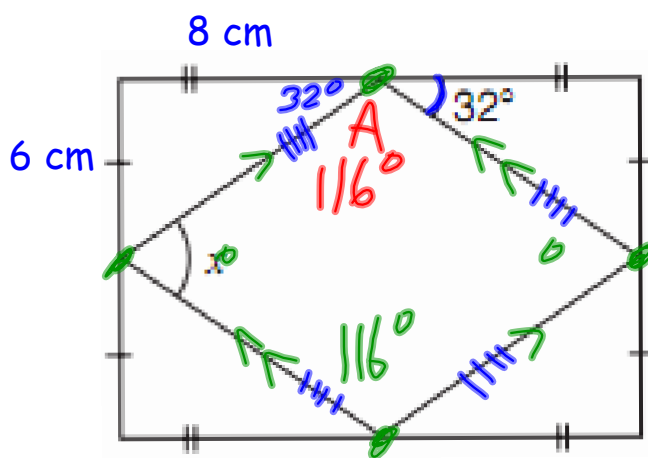
bisect



diagonal

Consolidation

Exit Question



- a. Determine the measure of angle x .

$$A = 180^\circ - 32^\circ - 32^\circ \text{ by SAT}$$

$$A = 116^\circ$$

$$x = 180^\circ - 116^\circ \text{ co-interior angles}$$

$$= 64^\circ$$

Consolidation

Homework

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Review
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