

Exploring Quadrilaterals

Create a quadrilateral to place in at least 3 different boxes on the attached grid based on the number of pairs of parallel sides and congruent sides. Create drawings that represent your shapes and explain why they fit using mathematical vocabulary. Use any available tools to assist with your drawings.

Shape C makes sense because 0 PARALLEL and 2 CONGRUENT.

Shape F makes sense because 1 PARALLEL 2 PAIRS OF CONGRUENT SIDES.

Shape G makes sense because 2 PARALLEL 2 CONGRUENT SIDES.

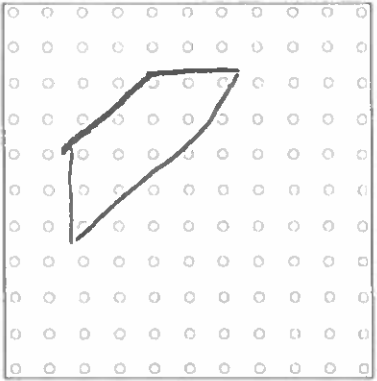
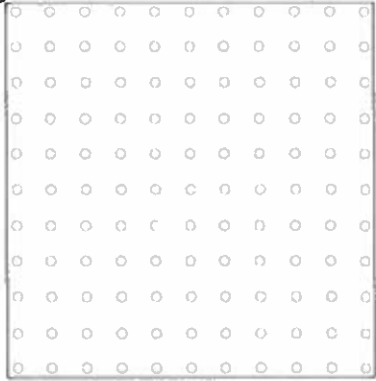
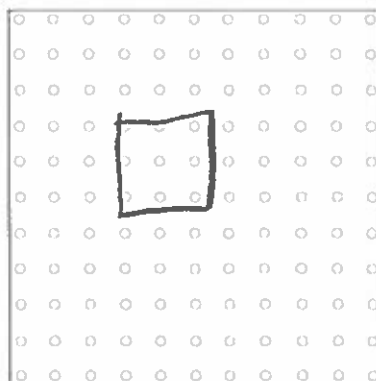
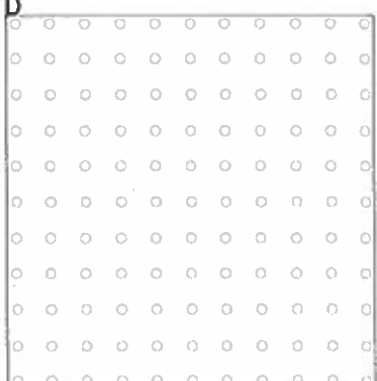
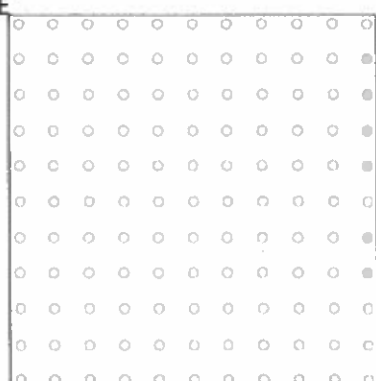
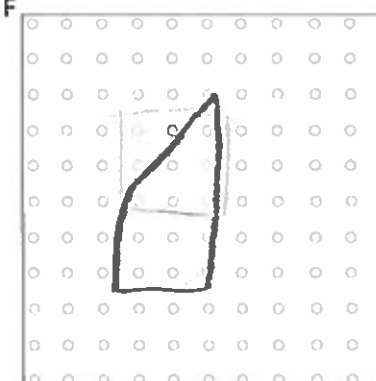
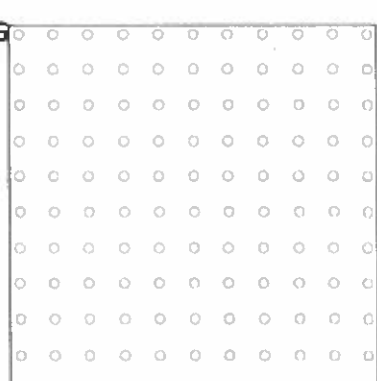
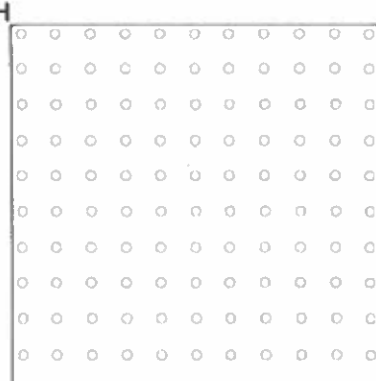
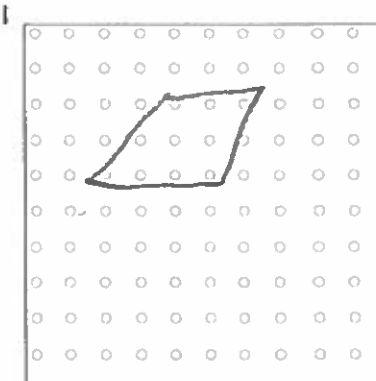
Keep thinking!

Are there any boxes in the grid that could have more than one quadrilateral?

Explain. 0 PARALLEL and 0 CONGRUENT ≠ JUST
had to PLAY around with it and it
worked

Were there any boxes for which no quadrilateral would fit? Explain.

Pairs of Congruent Sides

		0	1	2
Pairs of Parallel Sides	0	<p>A</p> 	<p>B</p> 	<p>C</p> 
	1	<p>D</p> 	<p>E</p> 	<p>F</p> 
	2	<p>G</p> 	<p>H</p> 	<p>I</p> 

Rich Mathematical Task – Grade 4 – Exploring Quadrilaterals

Exploring Quadrilaterals

Create a quadrilateral to place in at least 3 different boxes on the attached grid based on the number of pairs of parallel sides and congruent sides. Create drawings that represent your shapes and explain why they fit using mathematical vocabulary. Use any available tools to assist with your drawings.

Shape 1 makes sense because point 1 is a congru
4 side

Shape G makes sense because shape G makes sense
because it has 4 right angles

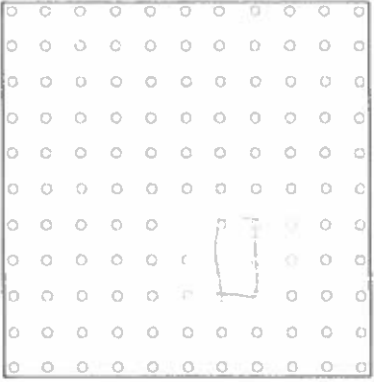
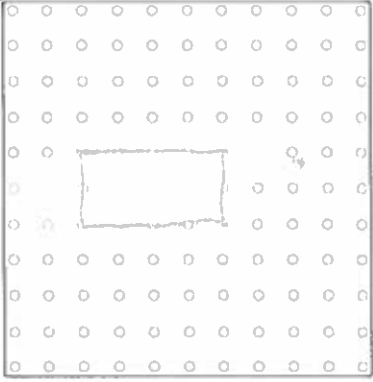
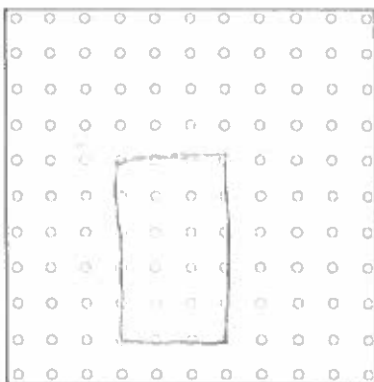

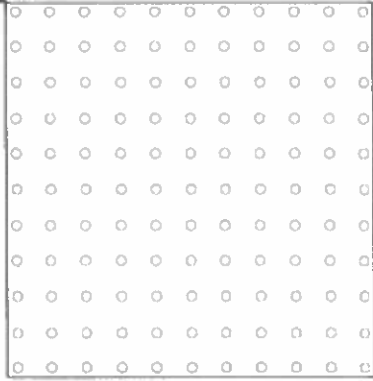

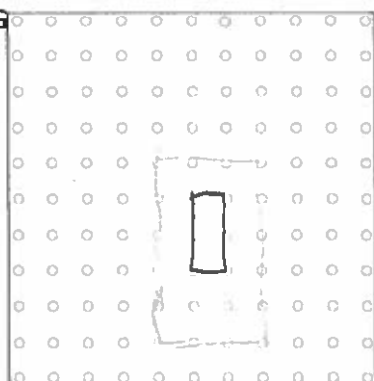
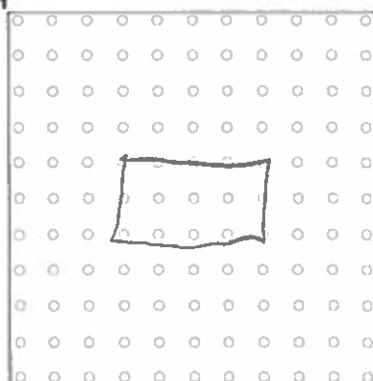

Shape B makes sense because shape B makes sense
because 4 sides 4 right angles

Keep thinking!

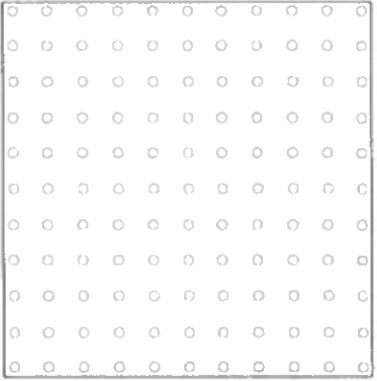
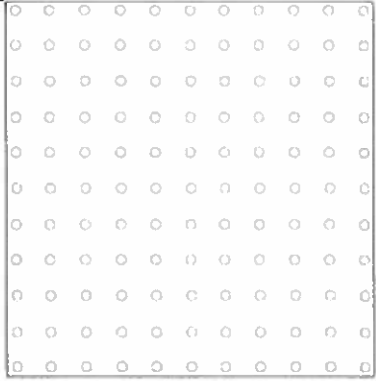
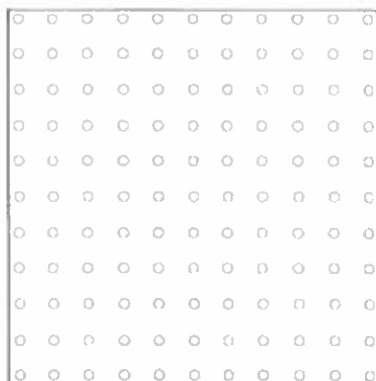
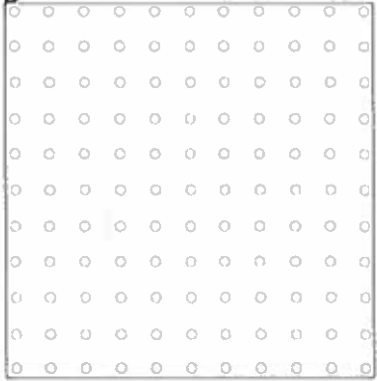
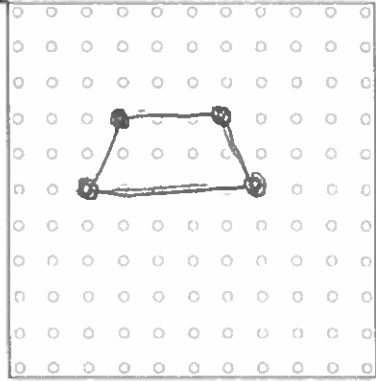

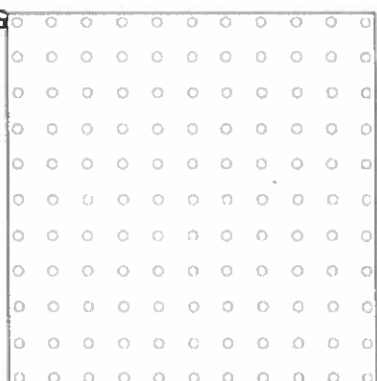
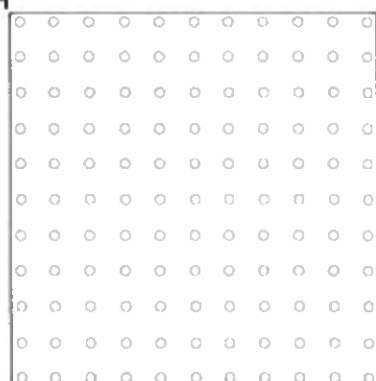
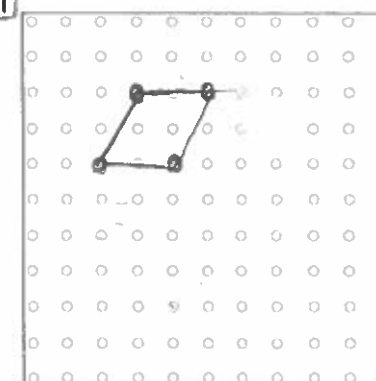
Are there any boxes in the grid that could have more than one quadrilateral? Explain.

Were there any boxes for which no quadrilateral would fit? Explain.

Pairs of Congruent Sides

		0	1	2
Pairs of Parallel Sides	0	<p>A</p> 	<p>B</p> 	<p>C</p> 
	1	<p>D</p> 	<p>E</p> 	<p>F</p> 
	2	<p>G</p> 	<p>H</p> 	<p>I</p> 

Pairs of Congruent Sides

		0	1	2
Pairs of Parallel Sides	0	A 	B 	C 
	1	D 	E 	F 
	2	G 	H 	I 

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Create a quadrilateral to place in at least 3 different boxes on the attached grid based on the number of pairs of parallel sides and congruent sides. Create drawings that represent your shapes and explain why they fit using mathematical vocabulary. Use any available tools to assist with your drawings.

Shape A makes sense because it has 0 pairs of congruent sides and 0 pairs of parallel sides.

Shape E makes sense because it has 1 pair of parallel sides and 1 congruent side.

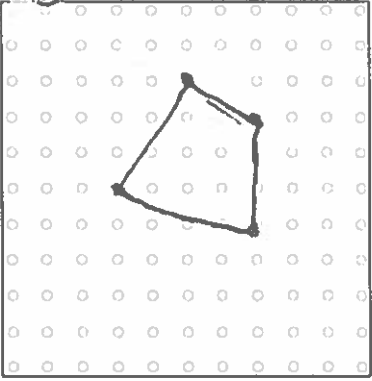

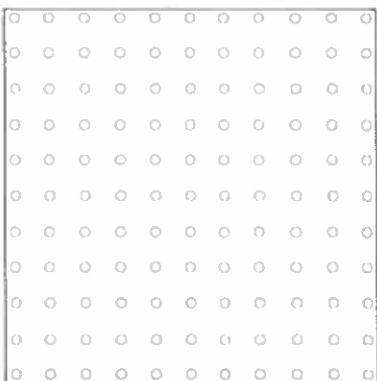

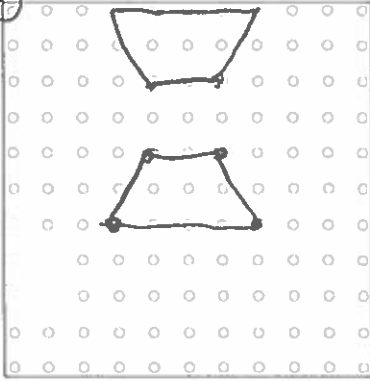

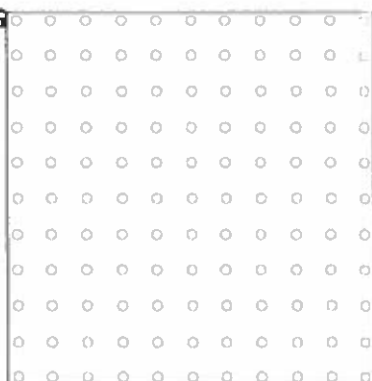
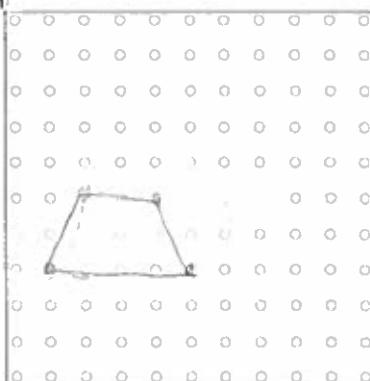
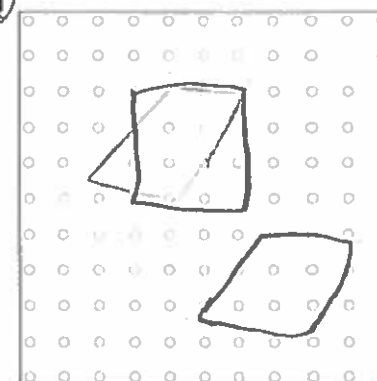
Shape I makes sense because it has 2 congruent sides and 2 parallel sides.

Keep thinking!

Are there any boxes in the grid that could have more than one quadrilateral? Explain.

Were there any boxes for which no quadrilateral would fit? Explain.

Pairs of Congruent Sides

		0	1	2
Pairs of Parallel Sides	0	A 	B 	C 
	1	D 	E 	F 
	2	G 	H 	I 

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Create a quadrilateral to place in at least 3 different boxes on the attached grid based on the number of pairs of parallel sides and congruent sides. Create drawings that represent your shapes and explain why they fit using mathematical vocabulary. Use any available tools to assist with your drawings.

Shape A makes sense because it does not have
parallel line and opposite line.

Shape E makes sense because 1 set of parallel
line and 1 of incongruent

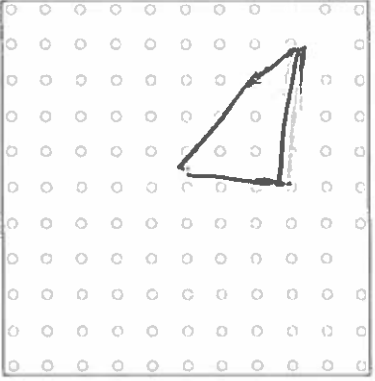
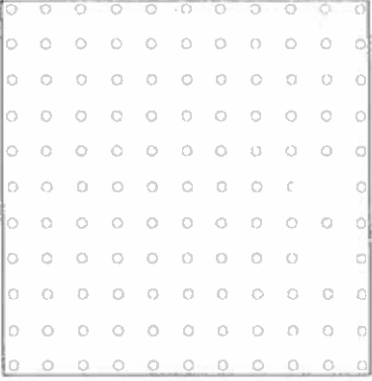
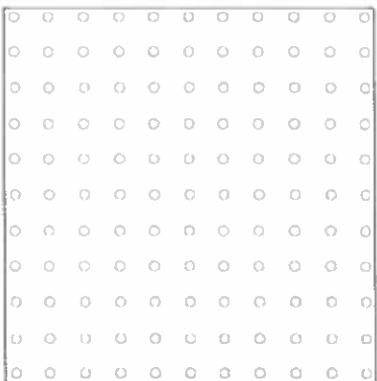
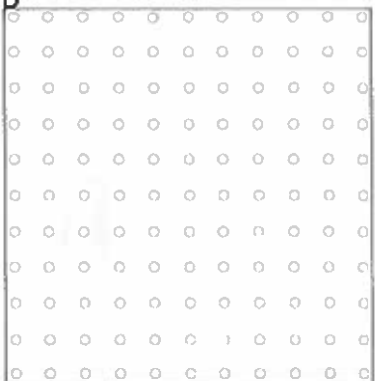
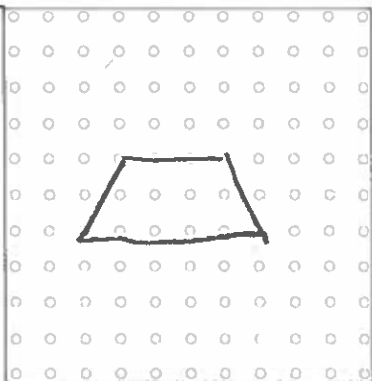

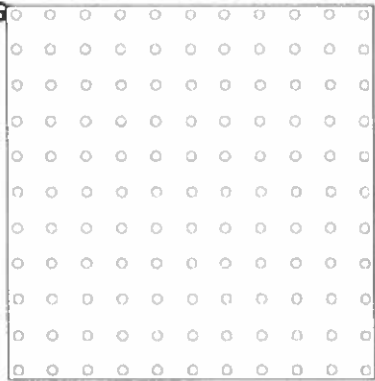
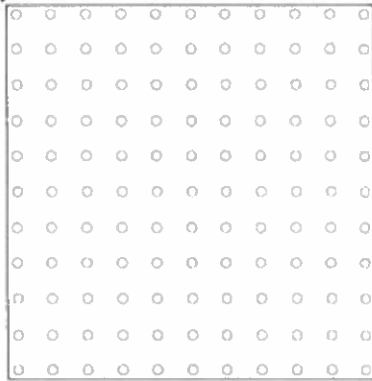
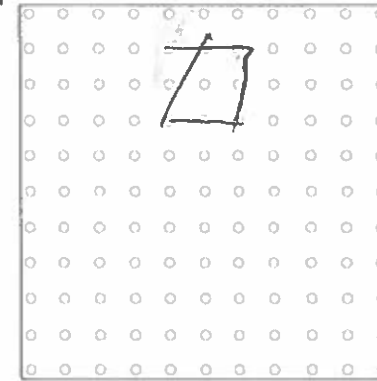
Shape I makes sense because _____

Keep thinking!

Are there any boxes in the grid that could have more than one quadrilateral? Explain.

Were there any boxes for which no quadrilateral would fit? Explain.

Pairs of Congruent Sides

		0	1	2
Pairs of Parallel Sides	0	<p>A</p> 	<p>B</p> 	<p>C</p> 
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Shape L makes sense because it doesn't touch
because it has space

Shape B makes sense because its corners don't
it doesn't touch

Shape C makes sense because its two parallel
sides touch all

Keep thinking!

Are there any boxes in the grid that could have more than one quadrilateral?

Explain.



quadrilaterals

Were there any boxes for which no quadrilateral would fit? Explain.

Pairs of Congruent Sides

		0	1	2
Pairs of Parallel Sides	0	A 	B 	C
	1	D 	E 	F
	2	G 	H 	I

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Create a quadrilateral to place in at least 3 different boxes on the attached grid based on the number of pairs of parallel sides and congruent sides. Create drawings that represent your shapes and explain why they fit using mathematical vocabulary. Use any available tools to assist with your drawings.

Shape A makes sense because it has 0 congruent sides
and 0 parallel sides so it follows
the rule.

Shape I makes sense because it has 2 congruent sides
and 2 parallel sides

Shape E makes sense because there is 1 congruent side
and 2 parallel sides

Keep thinking!

Are there any boxes in the grid that could have more than one quadrilateral?
Explain.

Were there any boxes for which no quadrilateral would fit? Explain.

Pairs of Congruent Sides

		0	1	2
Pairs of Parallel Sides	0	<p>A</p>	<p>B</p>	<p>C</p>
	1	<p>D</p>	<p>E</p>	<p>F</p>
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