

FUN with ALGEBRA

Some semi-practical applications

Square Pizzas:

How to divide up a 9 inch square pizza
equally among 9 people?

9 in

9^2 in^2



Square Pizzas:

How to divide up a 9 inch square pizza
equally among 9 people?

Make 2 cuts x apart
both vertically and
horizontally.

9 in

9^2 in^2

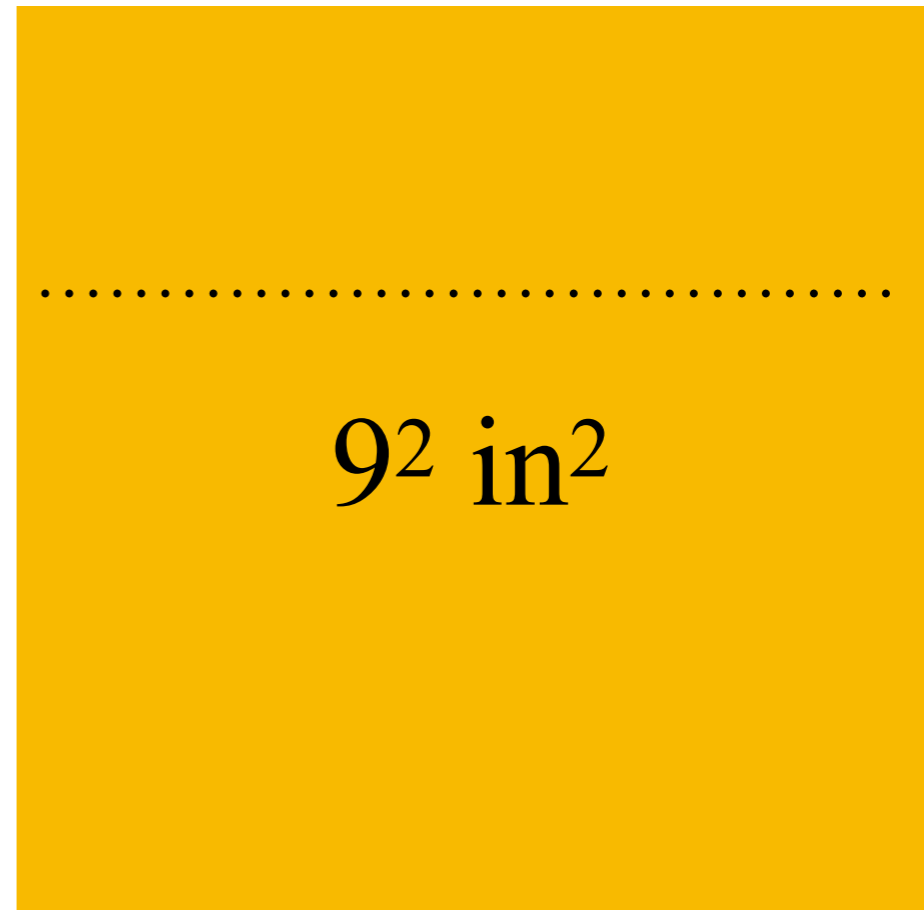


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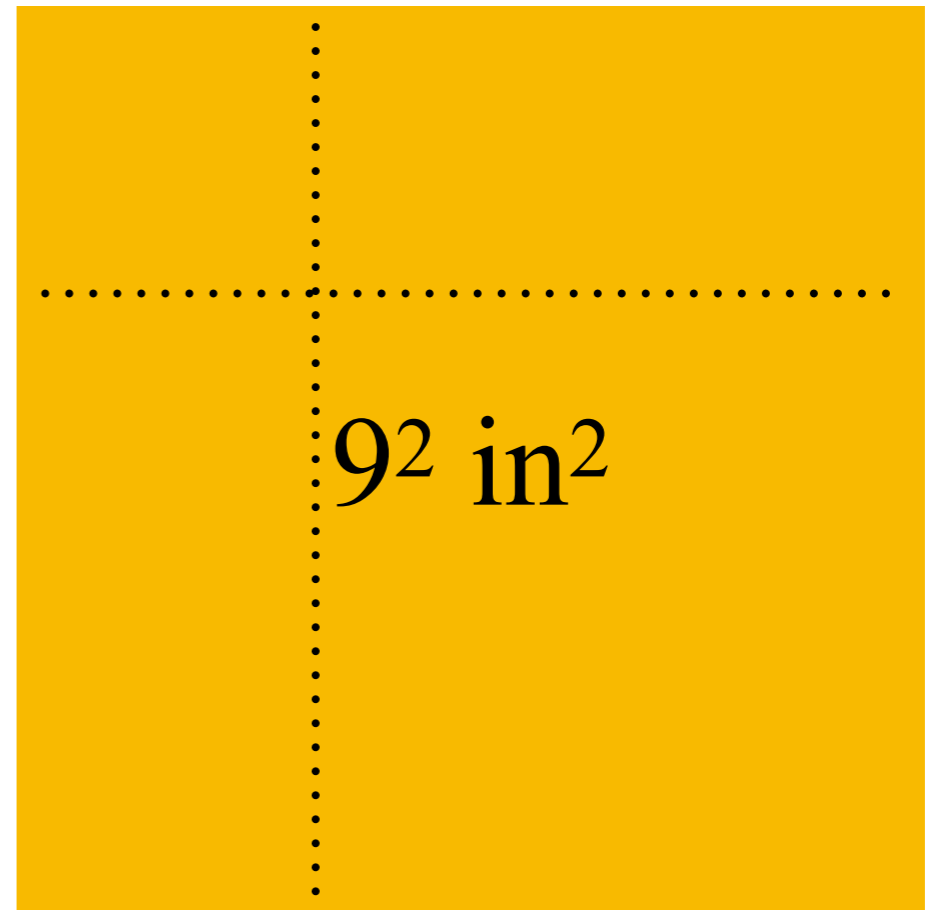


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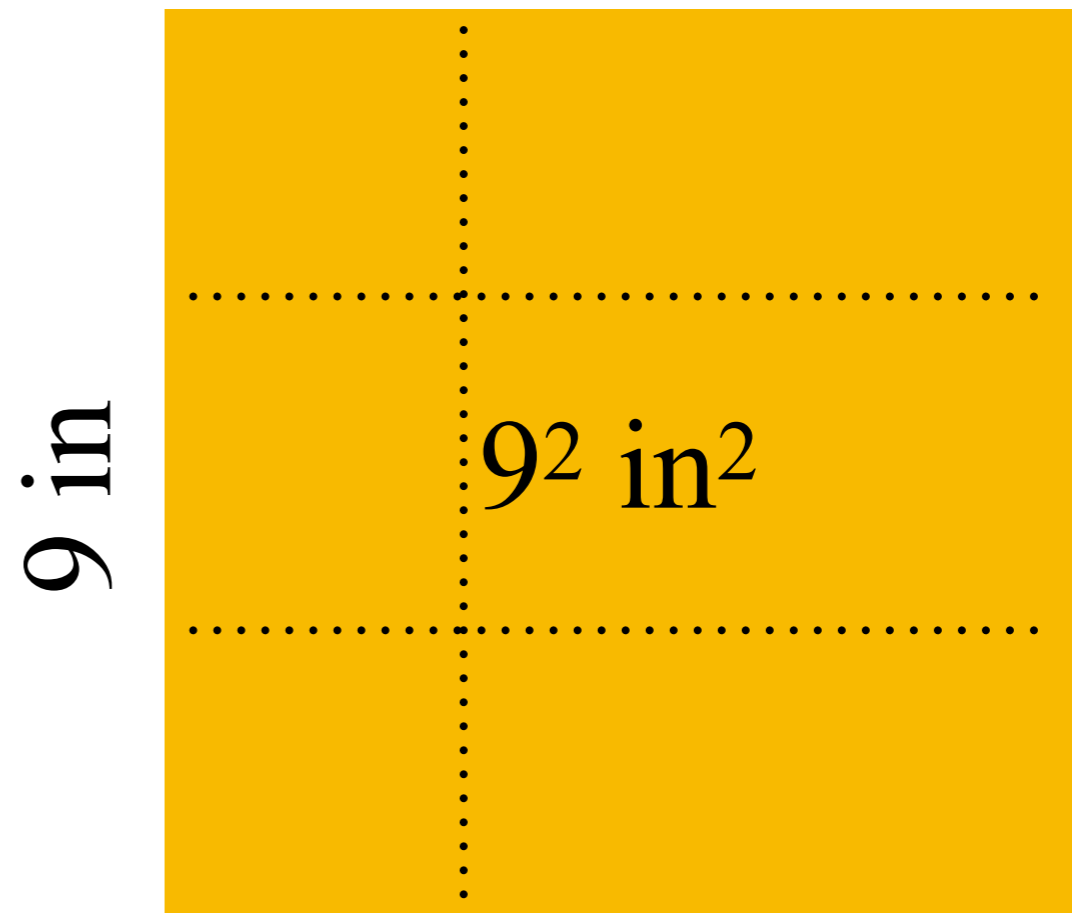
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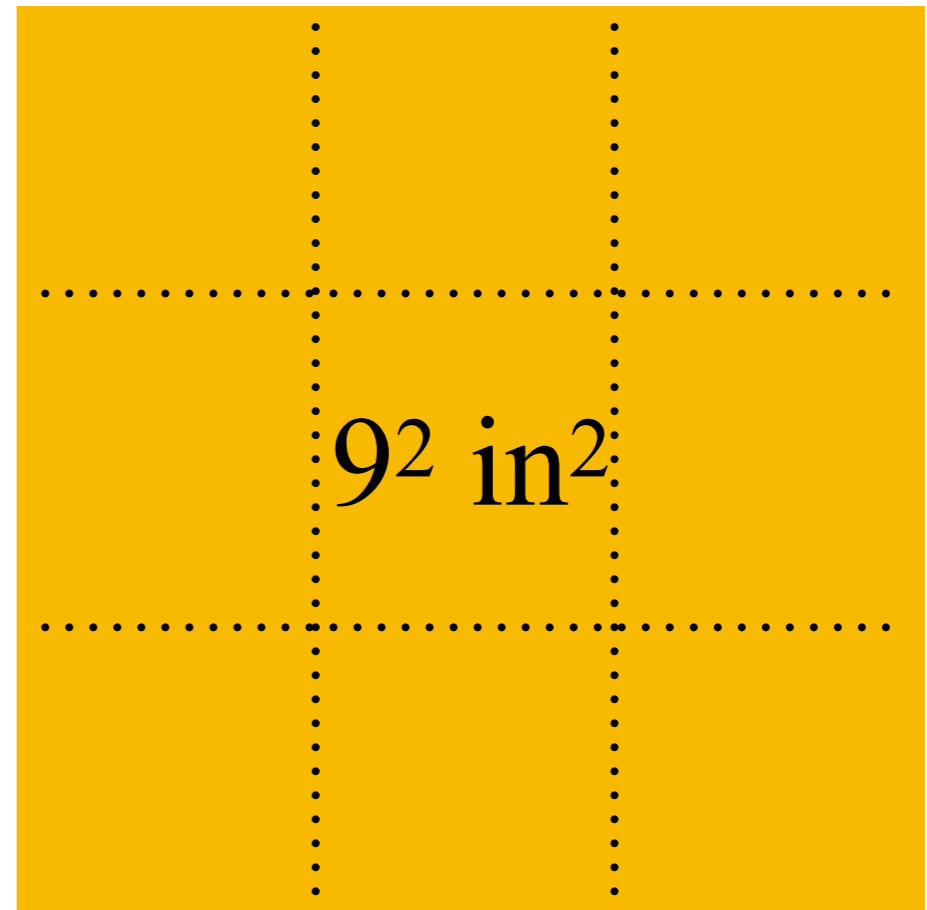


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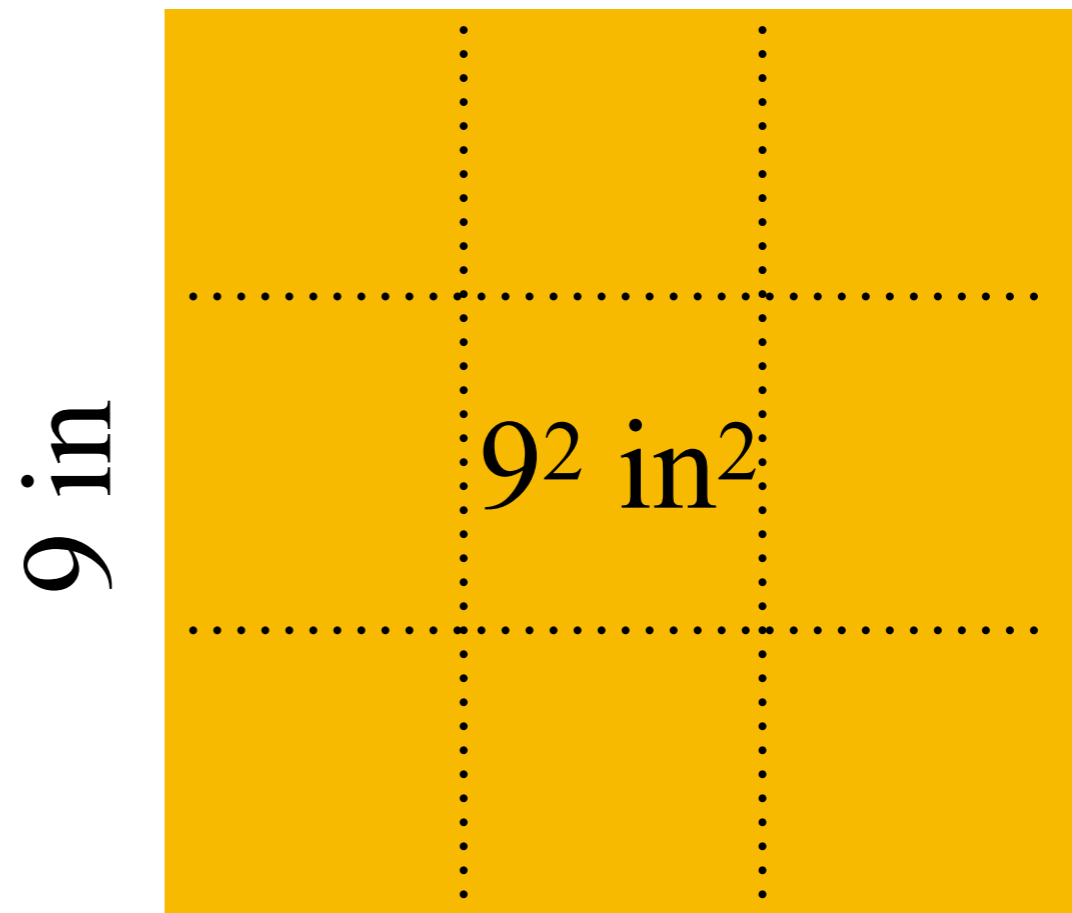
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Make 2 cuts x apart
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$$9x^2 = 9^2$$

$$x^2 = 9$$

$$x = 3$$

Square Pizzas:

How to divide up a 9 inch square pizza
equally among 8 people?

9 in

9^2 in^2



Square Pizzas:

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equally among 8 people?

Guess!

9 in

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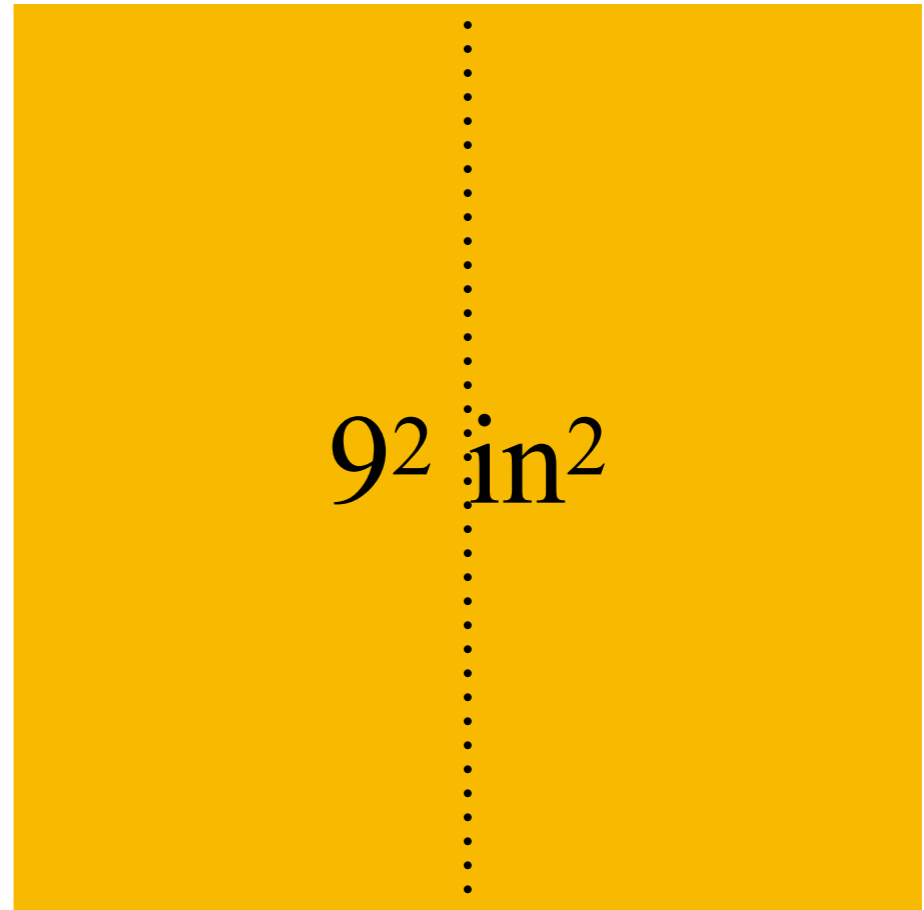
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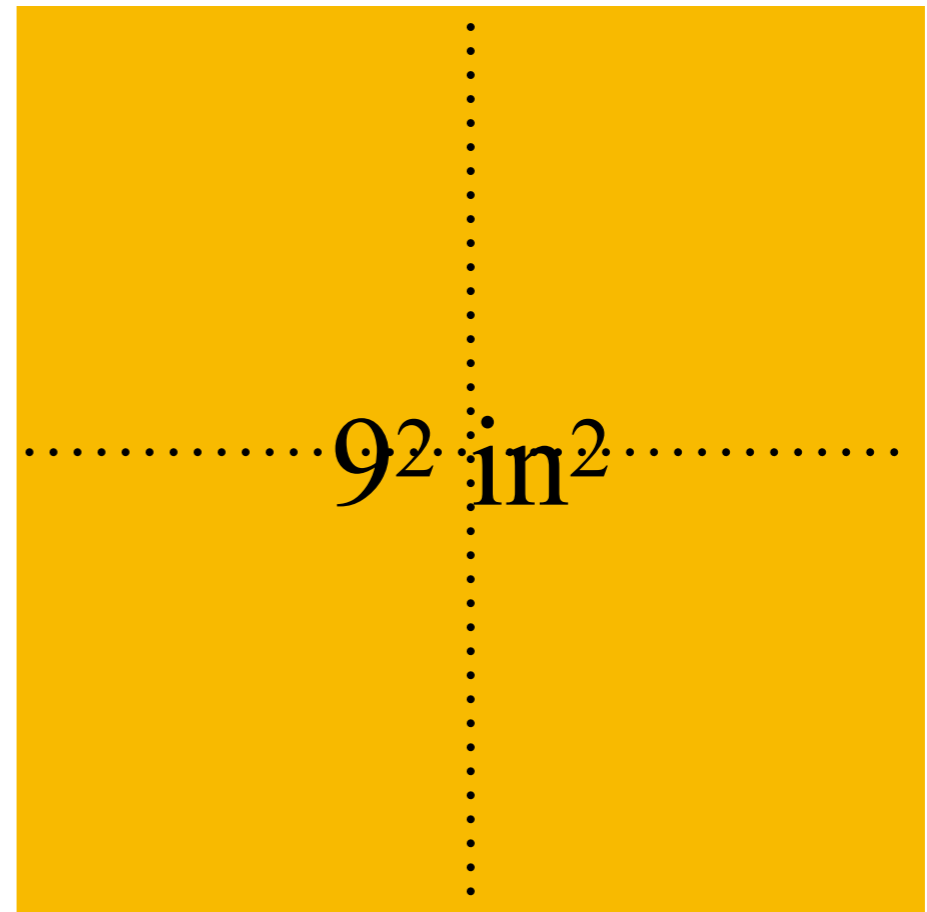


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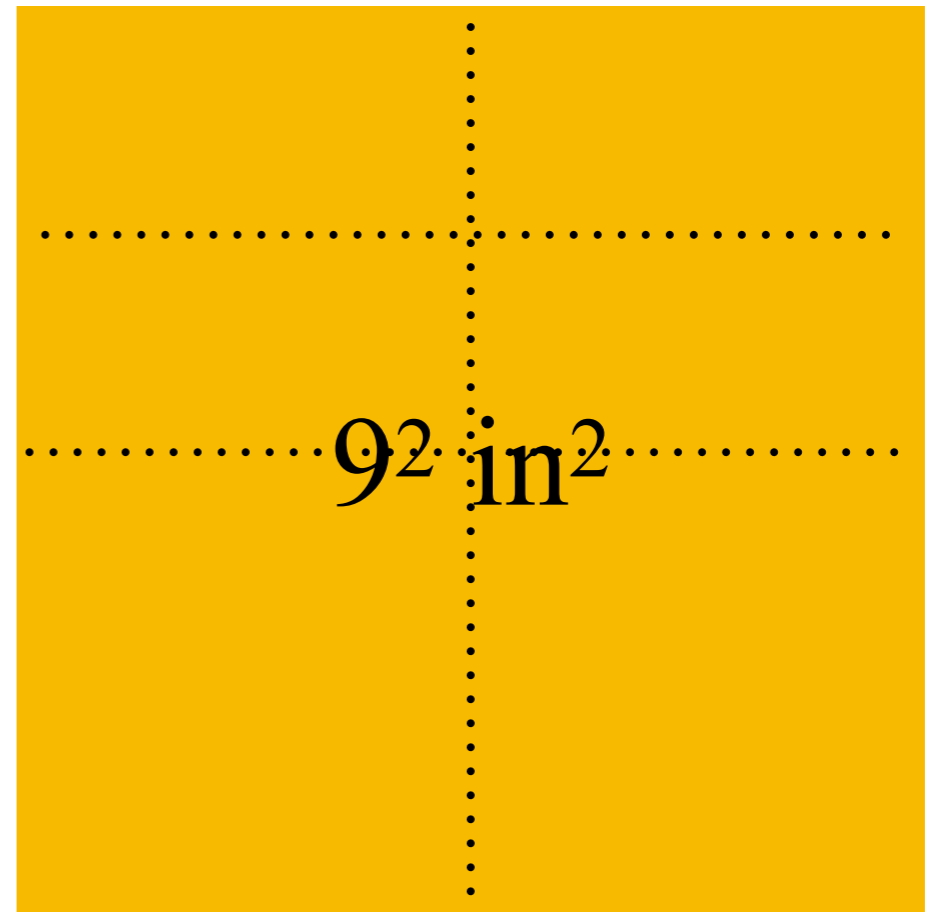


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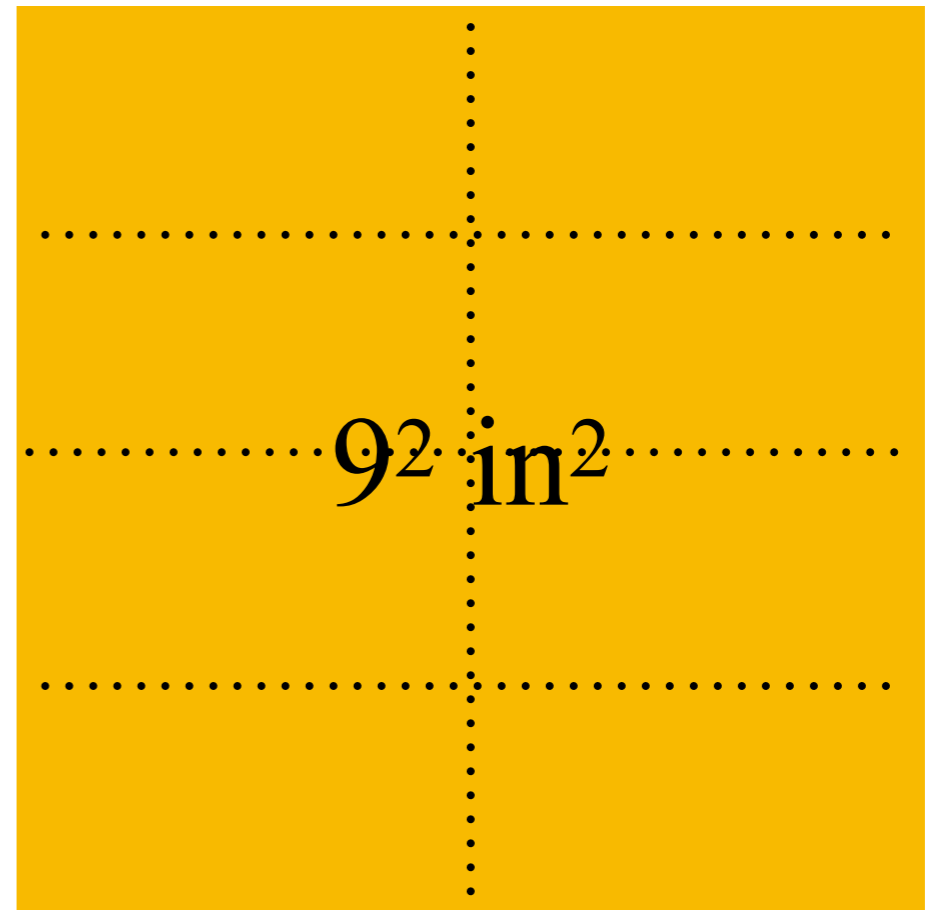


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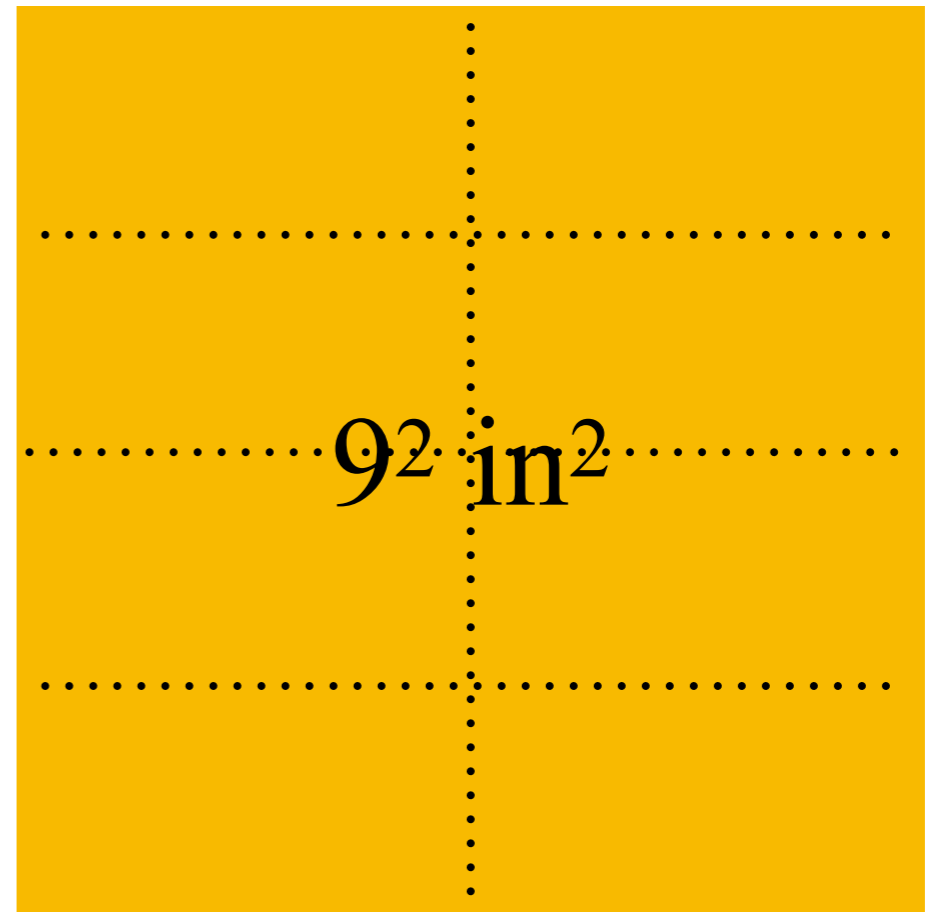


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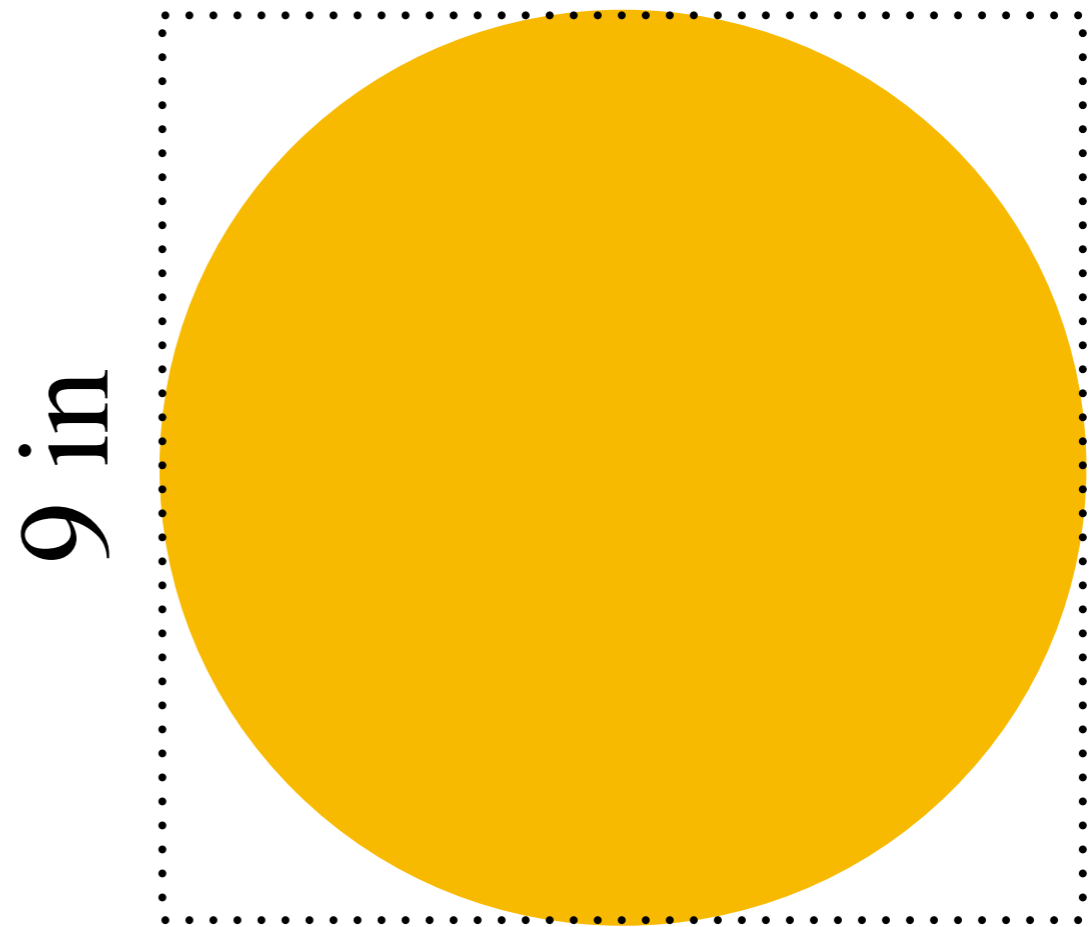
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Sometimes algebra is unnecessary!

Round Pizzas:

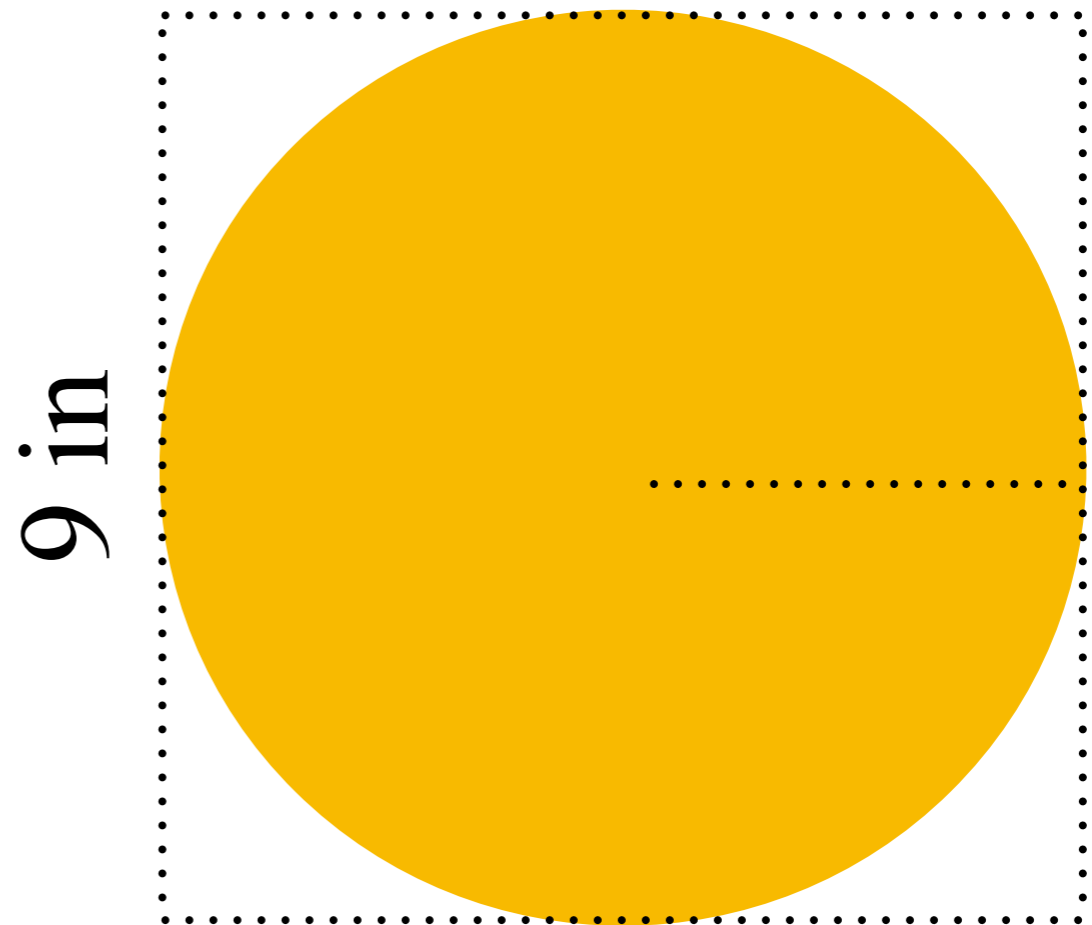
How to divide up a 9 inch *diameter* pizza equally among 9 people?



Round Pizzas:

How to divide up a 9 inch *diameter* pizza
equally among 9 people?

First cut...

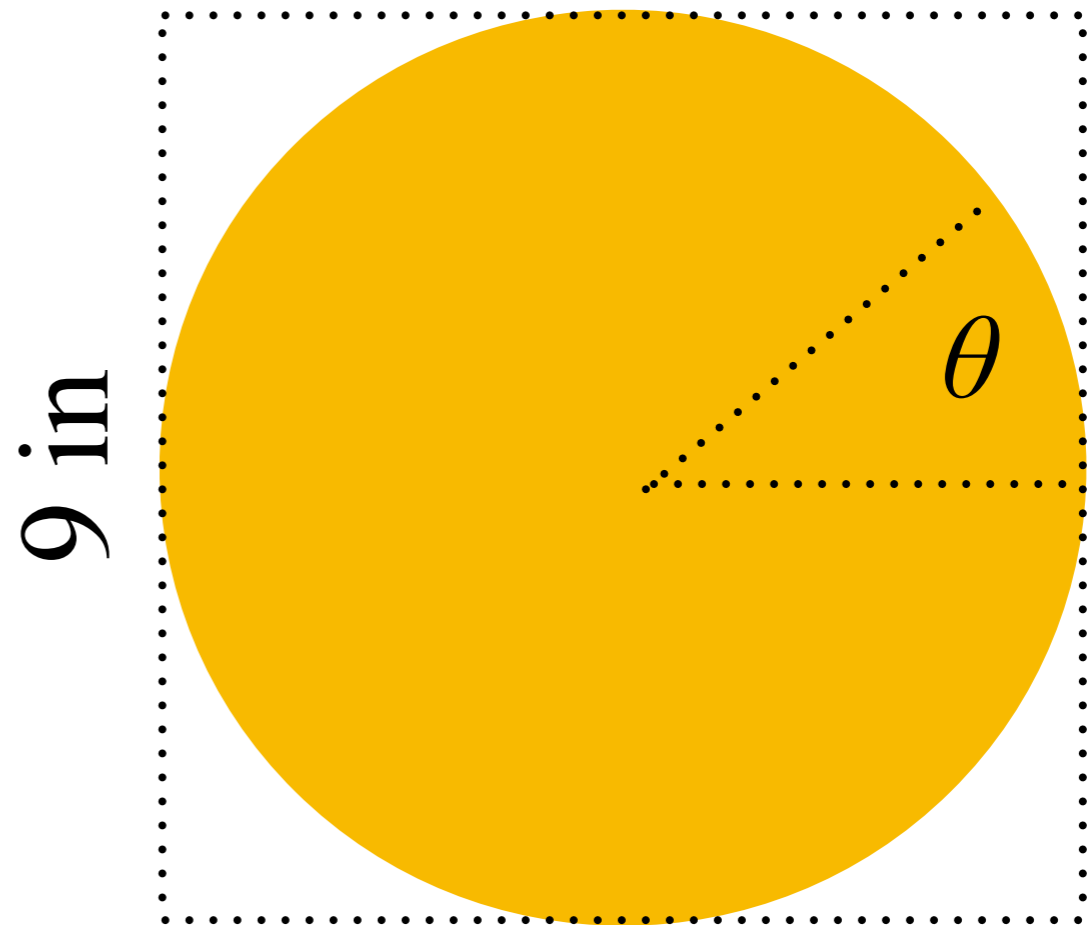


Round Pizzas:

How to divide up a 9 inch *diameter* pizza
equally among 9 people?

First cut...

Second cut at θ to
first cut...



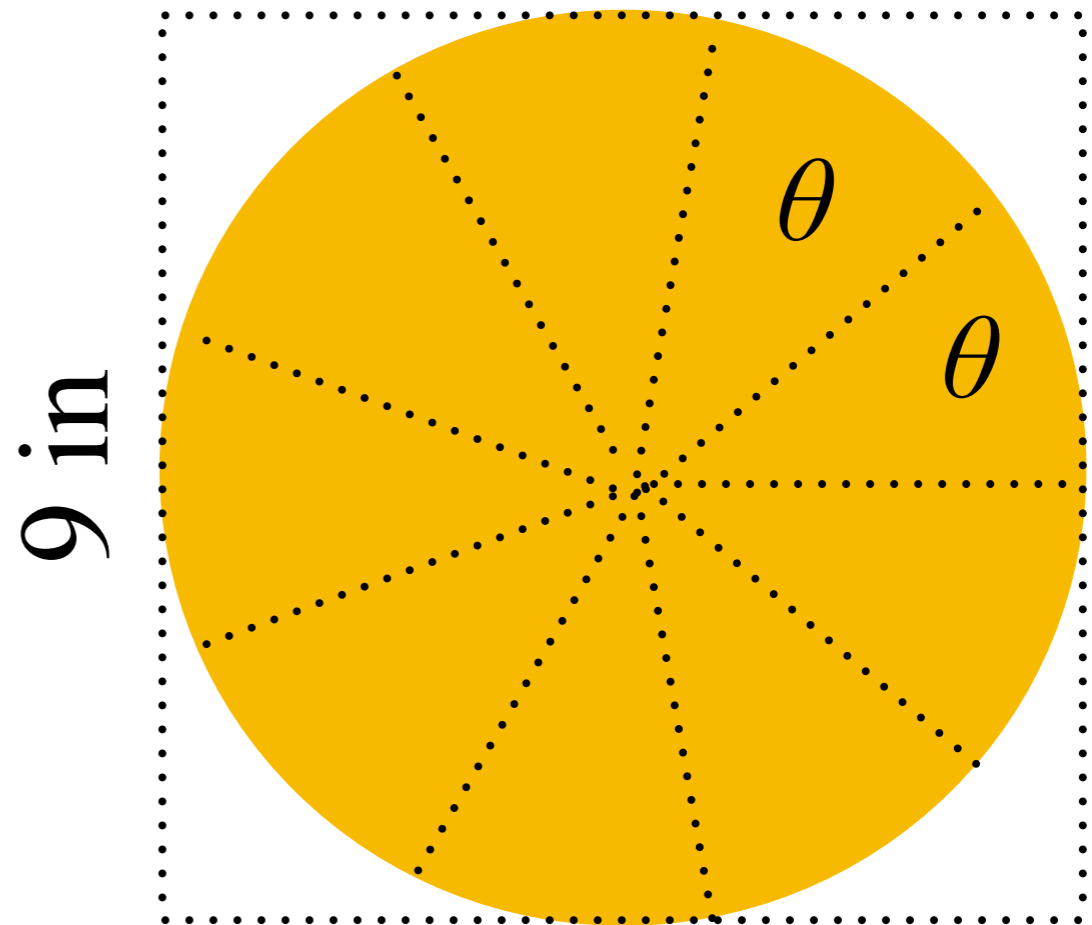
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How to divide up a 9 inch *diameter* pizza
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First cut...

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...and so on...



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How to divide up a 9 inch *diameter* pizza equally among 9 people?

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Second cut at θ to first cut...

...and so on...

$$9\theta = 360^\circ$$

$$\theta = 40^\circ$$

