

1. Choose just **one** of the following fractions and perform decomposition.

Each requires a special technique, so choose and solve carefully.

$$\frac{x^2 - x + 2}{x(x-1)^2} \quad \text{or} \quad \frac{x^3 + 2x^2 - x + 1}{x^2 + 3x - 4}$$



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of course you must show all
your supporting work!

Partial Fractions: _____

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#2. Find the **AREA** of the shaded region given by the following constraints.
 Show all supporting work in the space provided, including how you found area.

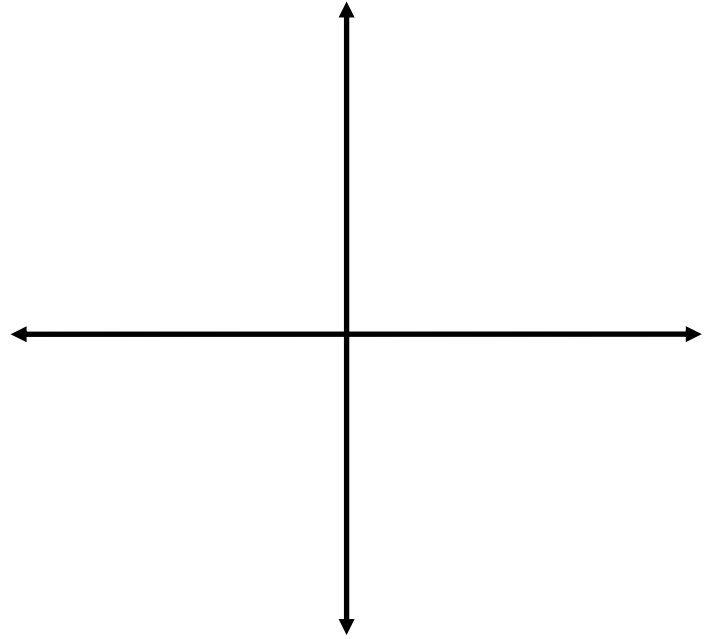
What type of shape is this?

Just some old quadrilateral.

No it's not; it is 2 triangles!

Oh cool! I know how to find the area of triangles using matrices

$$\begin{cases} y \geq -x - 2 \\ 2x + y \leq 8 \\ x \geq -2 \\ x \leq 3 \end{cases}$$



Final Area Answer: _____

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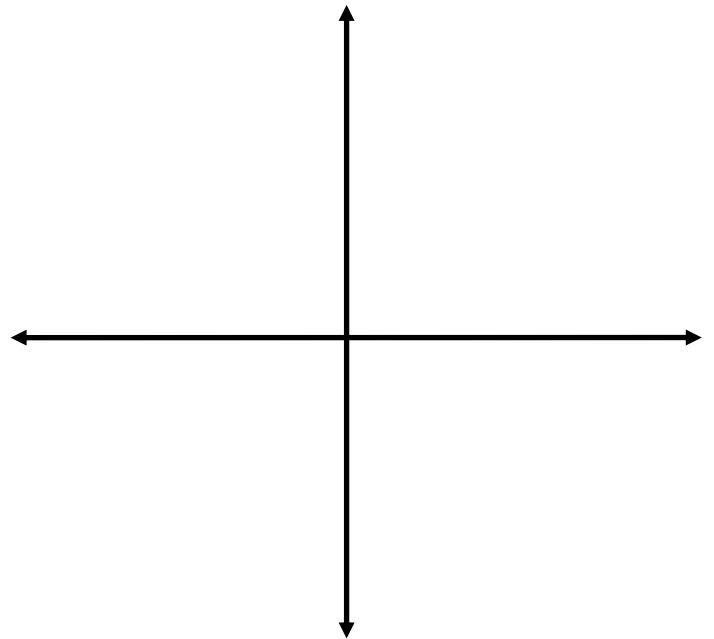
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