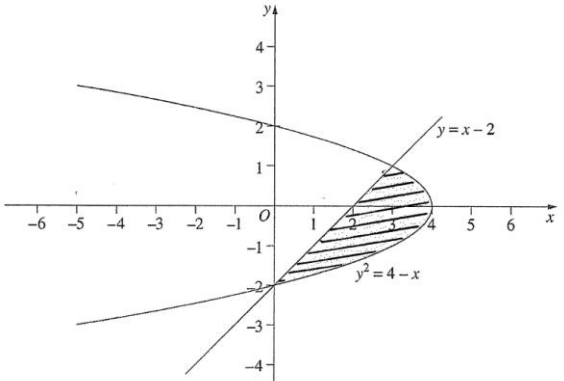


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<b>12</b>	<b>8</b>	<p>The diagram shows the region enclosed by <math>y = x - 2</math> and <math>y^2 = 4 - x</math>. Which of the following pairs of inequalities describes the shaded region in the diagram?</p> <p>(A) <math>y^2 \leq 4 - x</math> and <math>y \leq x - 2</math></p> <p>(B) <math>y^2 \leq 4 - x</math> and <math>y \geq x - 2</math></p> <p>(C) <math>y^2 \geq 4 - x</math> and <math>y \leq x - 2</math></p> <p>(D) <math>y^2 \geq 4 - x</math> and <math>y \geq x - 2</math></p>		<b>1</b>
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**A**

State Mean:

**0.44**

Choose point inside region: eg (3, 0)

For  $y^2 = 4 - x$ ,  $0 = 4 - 3$  ?

$0 = 1$  ?

But  $0 \leq 1 \quad \therefore y^2 \leq 4 - x$

For  $y = x - 2$ ,  $0 = 3 - 2$  ?

$0 = 1$  ?

But  $0 \leq 1 \quad \therefore y \leq x - 2$

$\therefore y^2 \leq 4 - x$  and  $y \leq x - 2$

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