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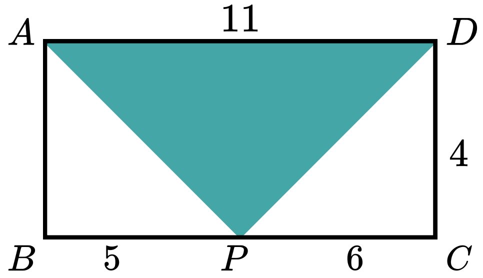
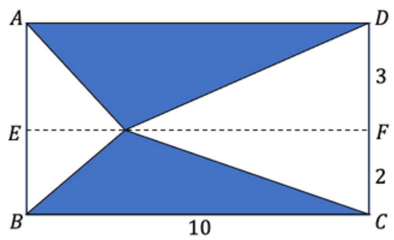
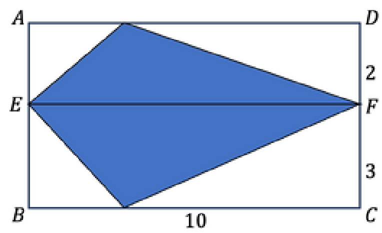
Triangle Model

	
Area of Rectangle ABCD	4 × 11 = 44
Area of Shaded Region	½ × 4 × 11 = 22
Area of Unshaded Region	½ × 4 × 5 + ½ × 4 × 6 = ½ × 4 × (5 + 6) = 22

I noticed that both the shaded and unshaded regions are triangles!

Did you notice that the area of the shaded region is actually the same as the unshaded region? It is a Half-Area Model!

		
Area of Rectangle ABCD	10 × (3 + 2) = 50	10 × (2 + 3) = 50
Area of Shaded Region	½ × 10 × 3 + ½ × 10 × 2 = 25	½ × 10 × 2 + ½ × 10 × 3 = 25
Area of Unshaded Region	50 - 25 = 25	50 - 25 = 25

$$A_{\text{unshaded}} = A_{\text{total}} - A_{\text{shaded}}$$

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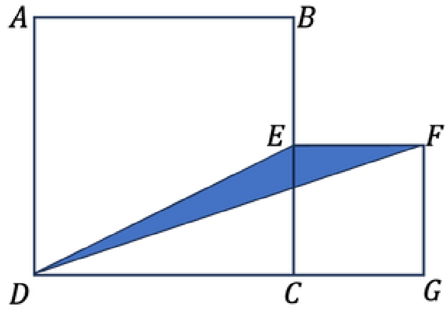
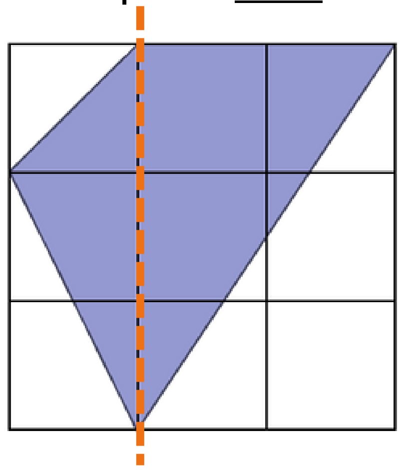
Two squares are arranged next to each other. If the area of square ECGF is 80 cm^2, the area of the shaded part is ___40___ cm^2.

$A_{DEF} = ½ × EF × FG$
$= ½ × A_{ECGF}$
$= ½ × 80$
$= 40\ (cm^2)$



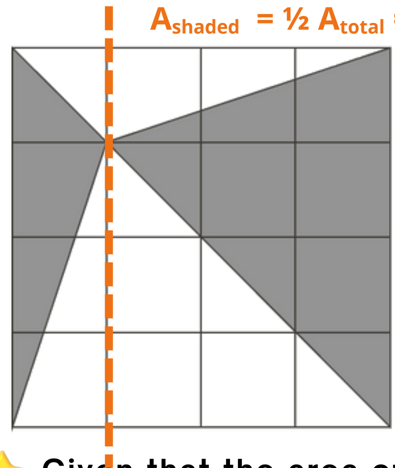
Given that each grid has a side length of 1, the area of the shaded part is ___4.5___.

Method 1:
$A_{shaded} = ½ × 3 × 1 + ½ × 3 × 2 = 4.5$
Method 2:
$A_{shaded} = A_{total} - A_{unshaded} = 3 × 3 - (½ × 1 × 1 + ½ × 1 × 2 + ½ × 2 × 3) = 4.5$
Method 3:
$A_{shaded} = ½\ A_{total} = ½ × 3 × 3 = 4.5$



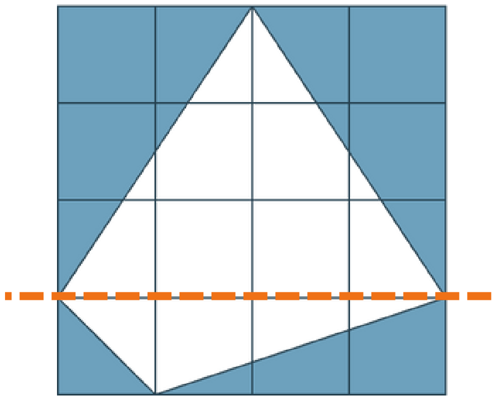
Given that each grid has a side length of 1, the area of the shaded part is ___8___.

$A_{shaded} = ½\ A_{total} = ½ × 4 × 4 = 8$



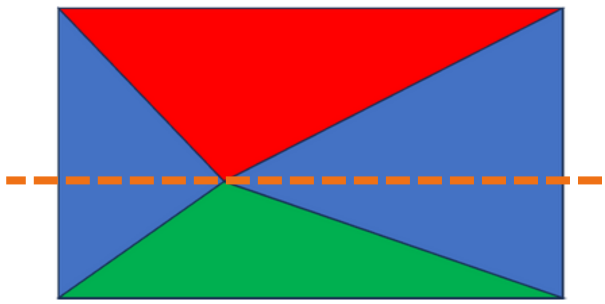
Given that each grid has a side length of 2, the area of the shaded part is ___32___.

$A_{shaded} = ½\ A_{total} = ½ × 8 × 8 = 32$



Given that the area of the blue part is 42 cm^2 and the area of the red part is 24 cm^2, the area of the green part is ___18___ cm^2.

$A_{blue} = ½\ A_{rectangle} = A_{red} + A_{green}$
$A_{green} = A_{blue} - A_{red} = 18\ (cm^2)$



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