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MAT 102

1 $x_p = x_1 + \frac{a}{a+b}(x_2 - x_1)$

$x_1 \; y_1 \quad x_2 \; y_2$
$(5, 3) \quad (15, -7)$

$= 5 + \frac{1}{1+3}(15-5)$

$= 5 + \frac{10}{4} = 7.5$

$y_p = y_1 + \frac{a}{a+b}(y_2 - y_1)$

$= 3 + \frac{1}{1+3}(-7-3)$

$= 3 + \frac{1}{4}(-10)$

$= 3 - \frac{10}{4} = 3 - 2.5 = 0.5$