Sketching Polynomials of degree greater than 2

- In factored form a polynomial will look like: $P(x) = a(x-r_1)(x-r_2)(x-r_3)\ldots$

$P(x) = 2(x-3)(4x-5)(2x-7)$

1. Find the y-intercept $P(0)$

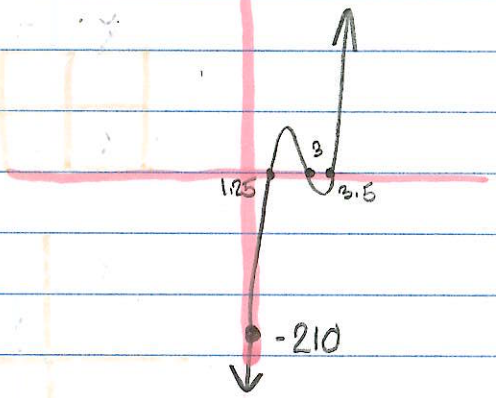
$P(0) = 2(0-3)(4(0)-5)(2(0)-7)$

$= 2 \cdot -3 \cdot -5 \cdot -7 = -210$

2. Find the x-intercepts $P(x) = 0$

Evaluate each factor $(x-r) = 0$

$x-3=0$	$4x-5=0$	$2x-7=0$
$+3\ +3$	$+5\ +5$	$+7\ +7$
$x=3$	$x=5/4$	$x=7/2$
	$x=1.25$	$x=3.5$



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