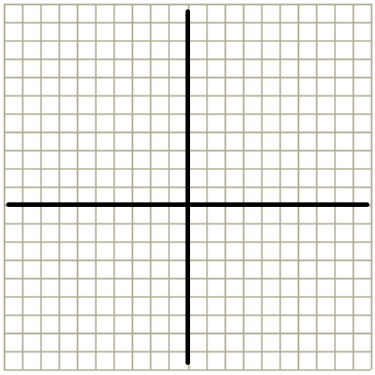
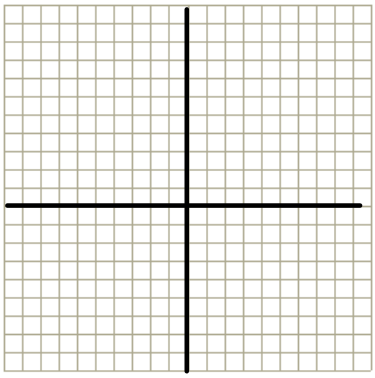
6.2 more

Graph the following:label x and y intercepts and local maximum and minimum.

① $y = x(x-8)^2$



② $y = (2x+5)(x-3)^2$



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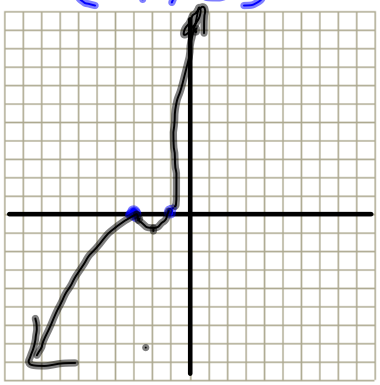
③ $y = (x+3)^2(x+1)$

$y = (0, 9)$

$x = (-3, 0)$ (mult. 2)
$(-1, 0)$



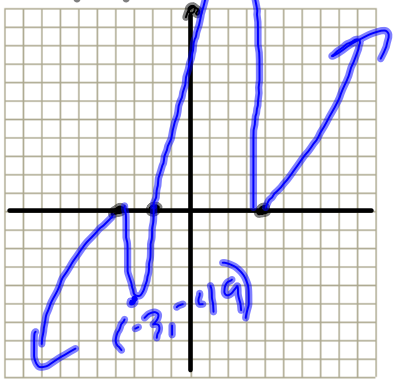
x^3

x^5

④ $y = (x-4)^2(x+2)(x+4)^2$

$y: (0, 512)$

$x: (4, 0)(4, 0)(-2, 0)$
$(-4, 0)(-4, 0)$



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⑤ $y = 2x^3 + 10x^2 + 12x$

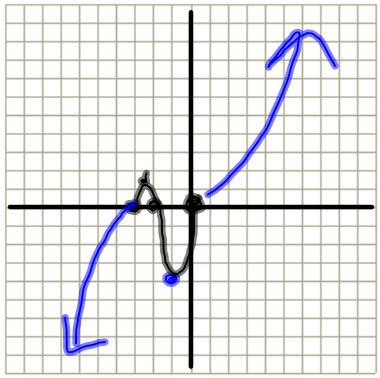
$2x(x^2 + 5x + 6)$

$2x(x + 2)(x + 3)$

$x = 0 \quad x = -2 \quad x = -3$

y-int: (0, 0)

x^3



⑥ $y = x^4 - x^3 - 6x^2$

$y = x^2(x^2 - x - 6)$

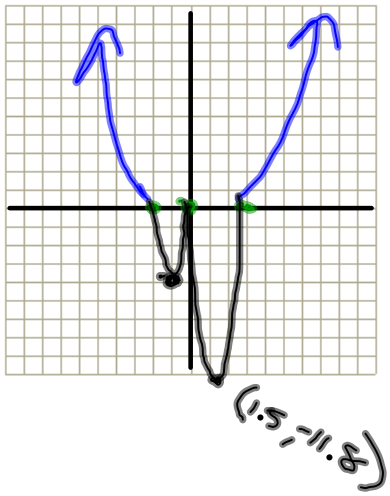
$y = x^2(x - 3)(x + 2)$

$x = 0 \quad x = 3, x = -2$

$x = 0$

y-int (0,0)

x^4



(1.5, -11.8)

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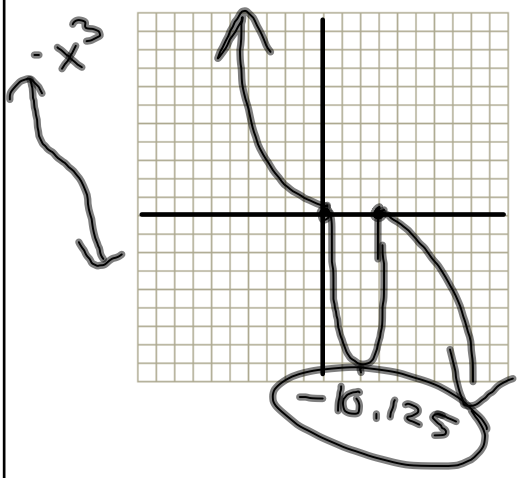
⑦ $y = -3x^3 + 18x^2 - 27x$

$-3x(x^2 - 6x + 9)$

$-3x(x - 3)(x - 3)$

$x = 0 \quad x = 3$ (mult. 2)

$-x^3$



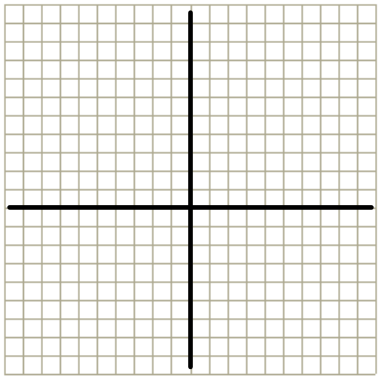
-16.125

⑧ $y = (x^3 - 3x^2)(x + 3)$

$y = x^2(x - 3) - 1(x - 3)$

$y = (x^2 - 1)(x - 3)$

$x = \pm 1 \quad x = 3$



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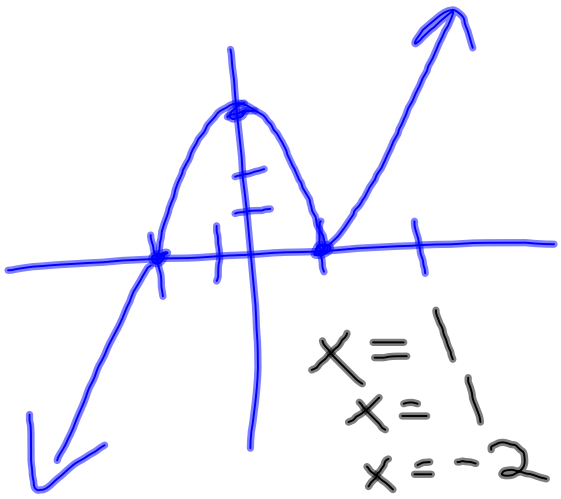

$x = 1$
$x = 1$
$x = -2$

$(x-1)(x-1)(x+2)$

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Graphell

Dec 14-7:10 PM