

Author: Naga Karthik

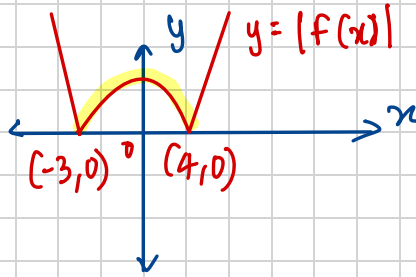
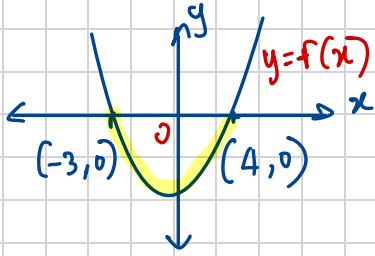
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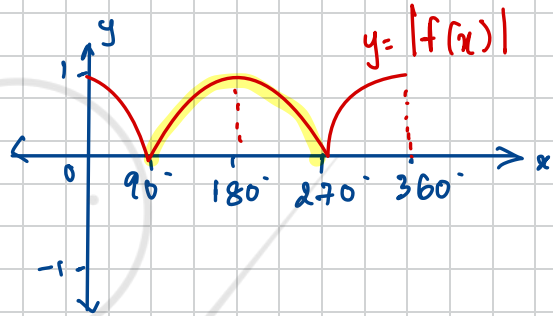
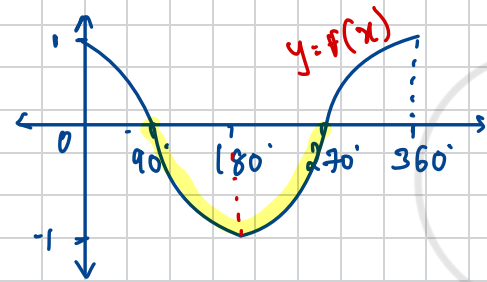
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2.5: $y = |f(x)|$ and $y = f(|x|)$

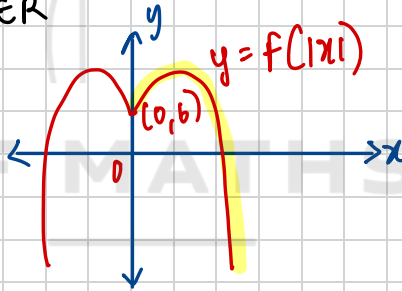
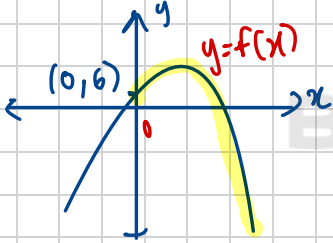
① a) $f(x) = x^2 - x - 12, x \in \mathbb{R}$



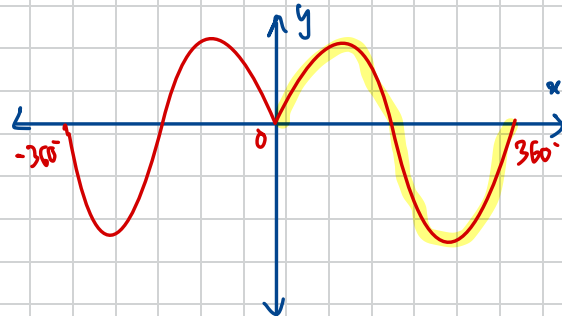
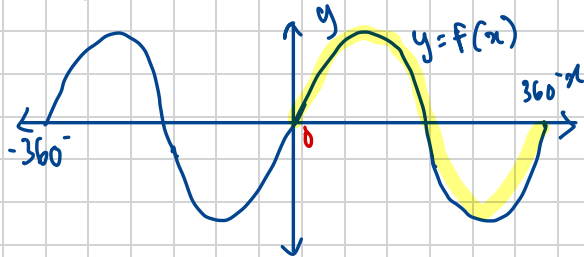
b) $f(x) = \cos x, 0 \leq x \leq 360^\circ$



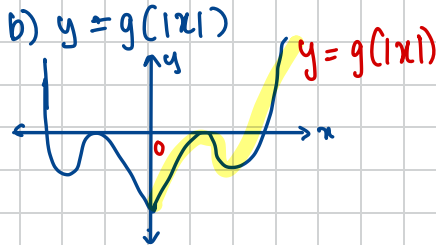
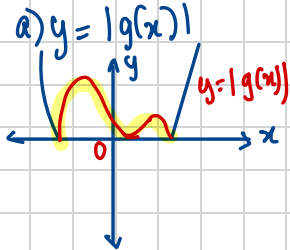
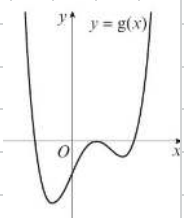
② a) $f(x) = 6 + 5x - x^2, x \in \mathbb{R}$



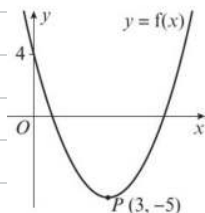
b) $f(x) = 2 \sin x, -360^\circ \leq x \leq 360^\circ$



③

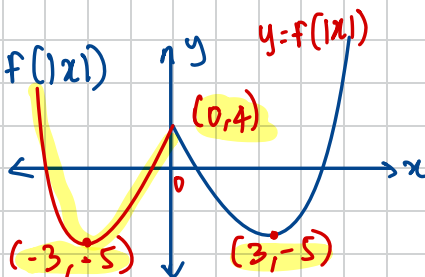


④

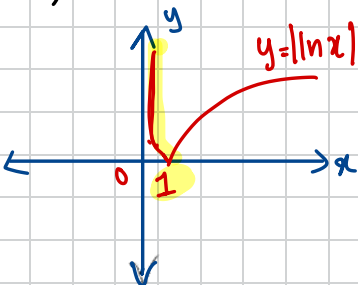


a) P(3, -5)

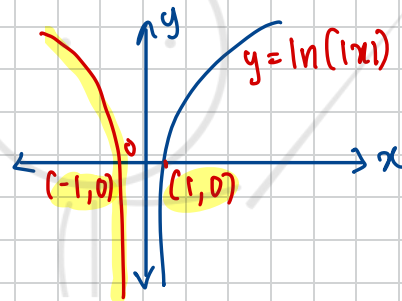
b) $y = f(|x|)$



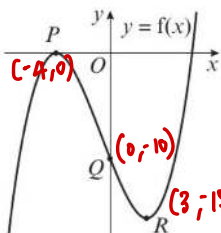
⑤ a) $y = |\ln x|$



b) $y = \ln(|x|)$

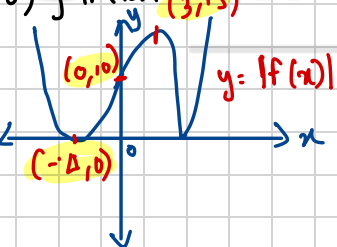


⑥

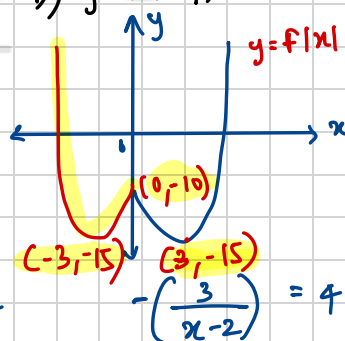


P(-4, 0) Q(0, 10) R(3, -15)

a) $y = |f(x)|$

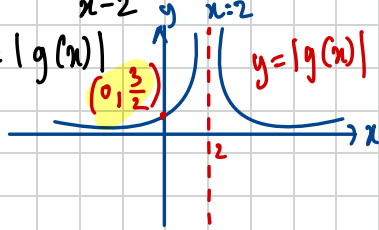


b) $y = f(|x|)$



⑦ $g(x) = \frac{3}{x-2}, x \in \mathbb{R}, x \neq 2$

a) $y = |g(x)|$



b) $\frac{3}{x-2} = 4$

$\Rightarrow 3 = 4x - 8$

$\Rightarrow 4x = 11$

$\Rightarrow \boxed{x = \frac{11}{4}}$

$-\left(\frac{3}{x-2}\right) = 4$

$\Rightarrow -3 = 4x - 8$

$5 = 4x$

$\Rightarrow \boxed{x = \frac{5}{4}}$