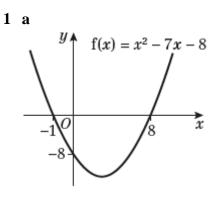
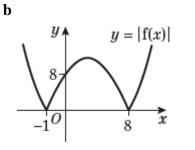
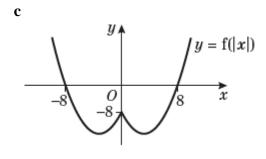
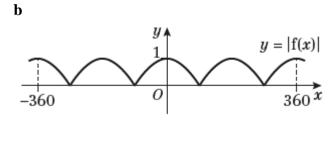
Functions and graphs 2E

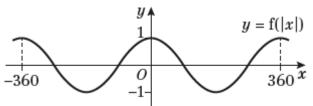




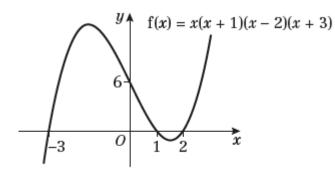




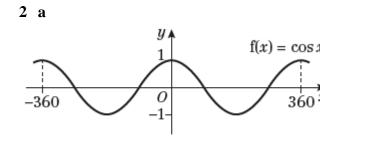
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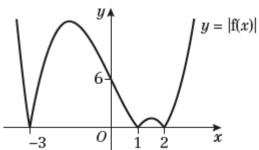


3 a



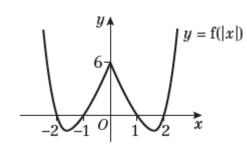
b



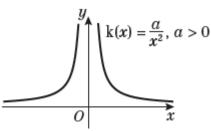


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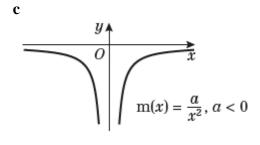
3 c







b There is no need to sketch $y = |\mathbf{k}(x)|$ and $y = \mathbf{k}(|x|)$ as these graphs would match the original graph.

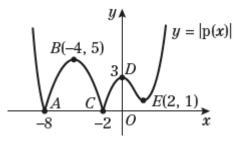


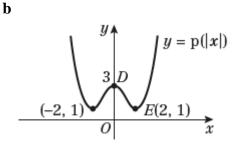
d i
$$|\mathbf{k}(x)| = |\mathbf{m}(x)|$$
 is true:
 $|\mathbf{k}(x)| = \left|\frac{a}{x^2}\right| = \left|\frac{-a}{x^2}\right| = |\mathbf{m}(x)|$

ii
$$k(|x|) = m(|x|)$$
 is false:
 $k(|x|) = \frac{a}{|x|^2} \neq \frac{-a}{|x|^2} = m(|x|)$

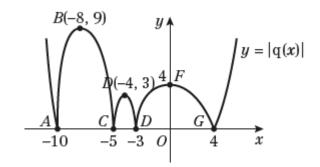
iii m(x) = m(|x|) is true: $m(x) = \frac{-a}{|x|^2} = \frac{-a}{|x|^2} = m(|x|)$



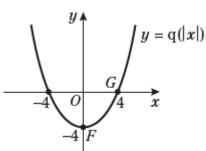




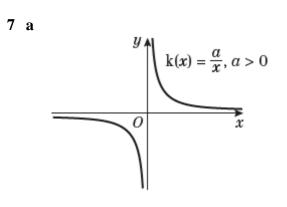
6 a



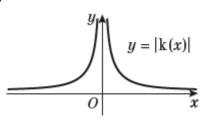
b

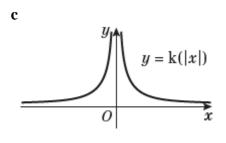


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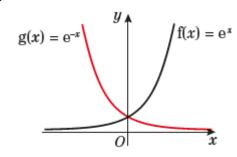




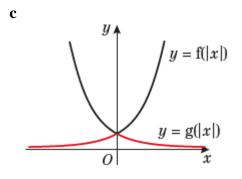




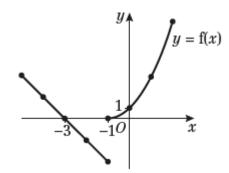
9 a



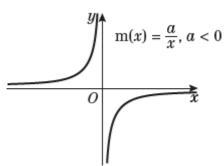
b The graphs of $y = |\mathbf{f}(x)|$ and $y = |\mathbf{g}(x)|$ are the same as the original graph.



10 a



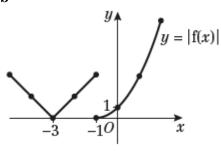




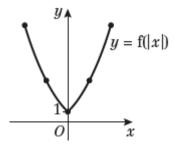
b $y = |\mathbf{m}(x)|$ and $y = \mathbf{m}(|x|)$ are reflections of each other in the *x*-axis. $|\mathbf{m}(x)| = -\mathbf{m}(|x|)$

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10 b







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