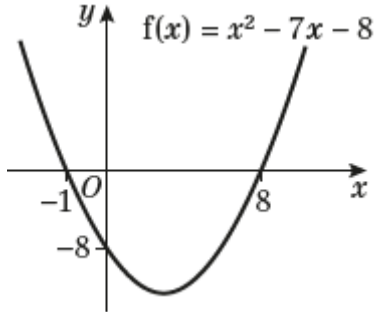
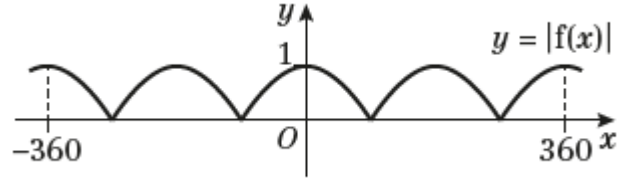


Functions and graphs 2E

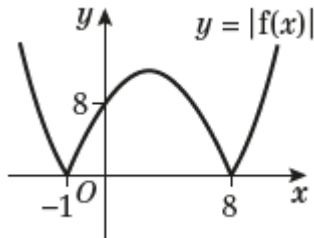
1 a



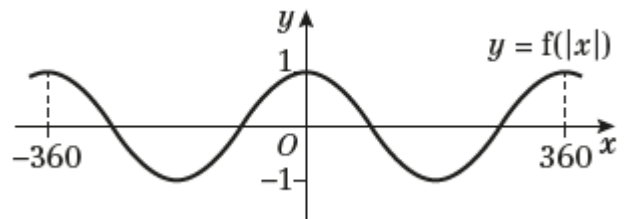
b



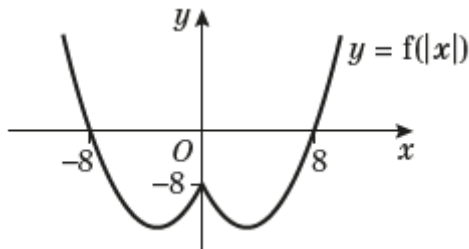
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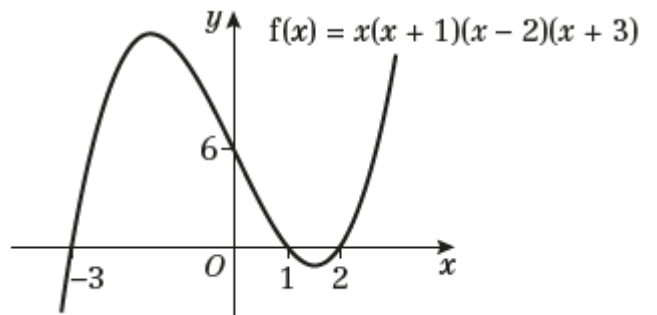
c



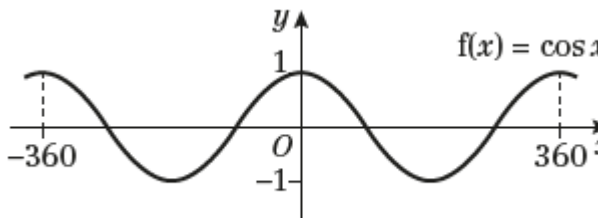
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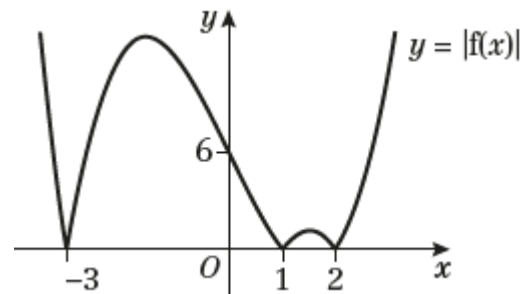
3 a



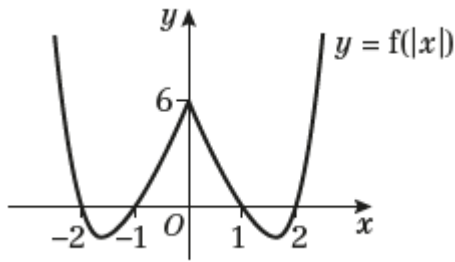
2 a



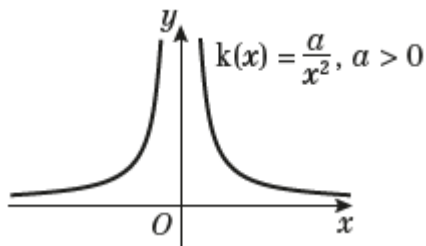
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3 c

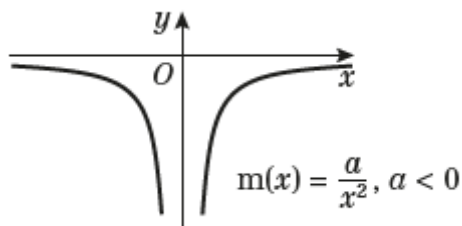


4 a



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

c



d i $|k(x)| = |m(x)|$ is true:

$$|k(x)| = \left| \frac{a}{x^2} \right| = \left| \frac{-a}{x^2} \right| = |m(x)|$$

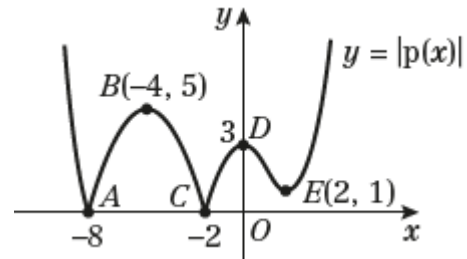
ii $k(|x|) = m(|x|)$ is false:

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

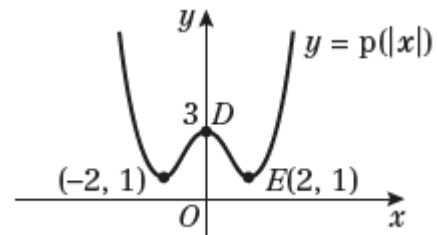
iii $m(x) = m(|x|)$ is true:

$$m(x) = \frac{-a}{|x|^2} = \frac{-a}{|x|^2} = m(|x|)$$

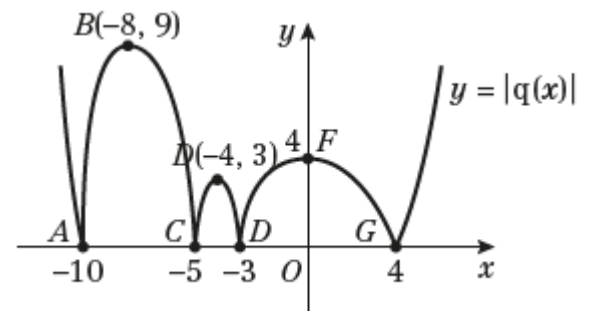
5 a



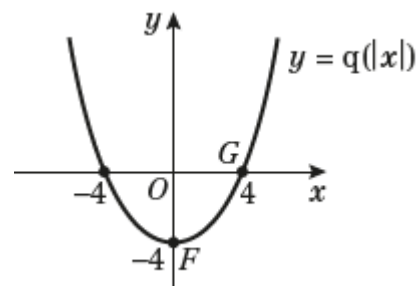
b



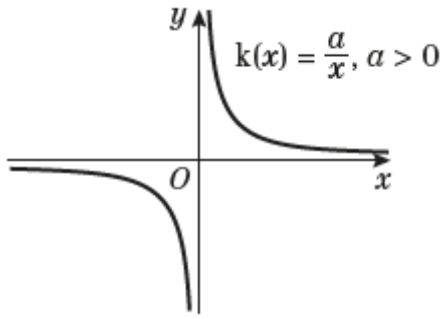
6 a



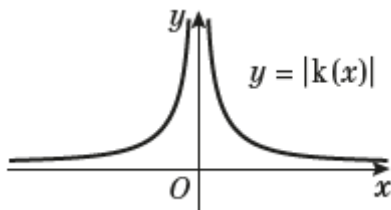
b



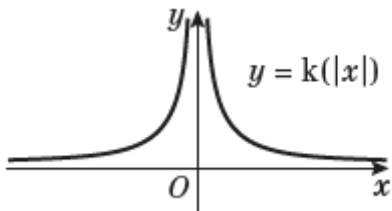
7 a



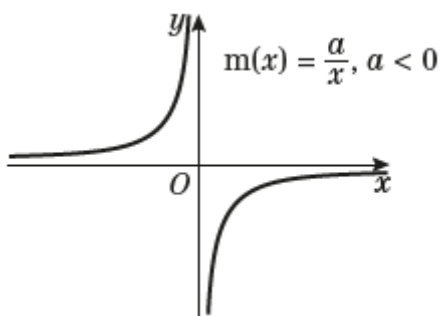
b



c



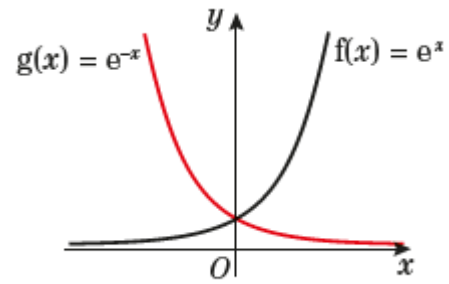
8 a



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

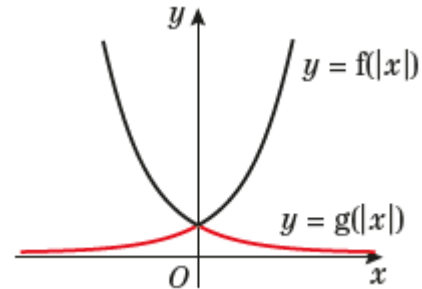
$$|m(x)| = -m(|x|)$$

9 a

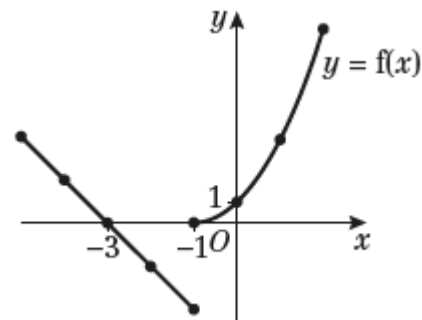


b The graphs of $y = |f(x)|$ and $y = |g(x)|$ are the same as the original graph.

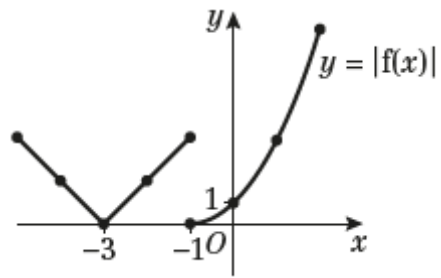
c



10 a



10 b



c

