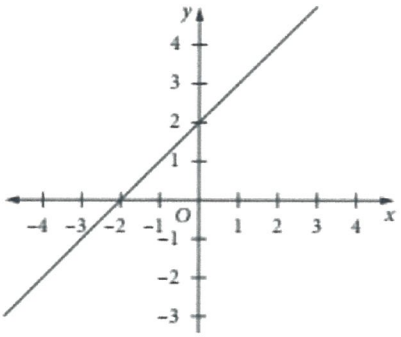
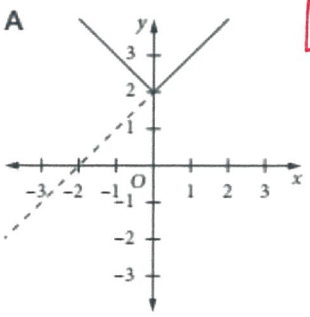
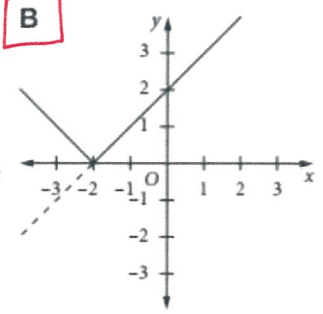
ABSOLUTE VALUE FUNCTIONS

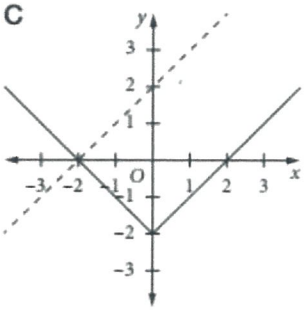
1 The graph of $y = x + 2$ is shown.

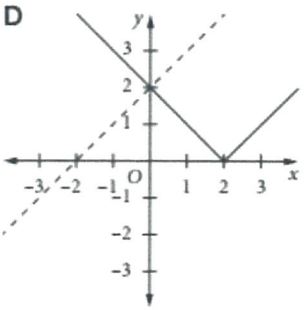


Which of the following represents the graph of $y = |x + 2|$?

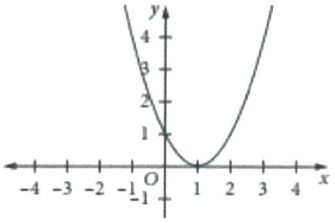
A 

B 

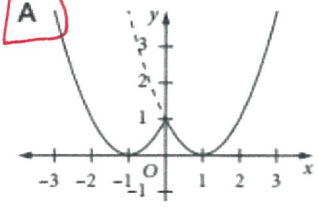
C 

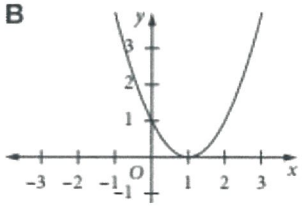
D 

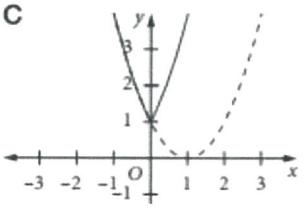
2 The graph of $y = (x - 1)^2$ is shown.

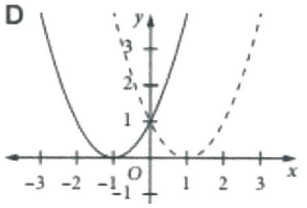


Which of the following represents the graph of $y = (|x| - 1)^2$?

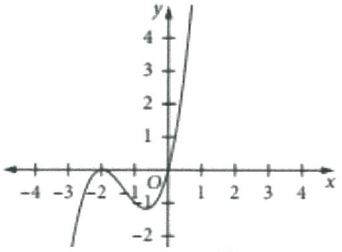
A 

B 

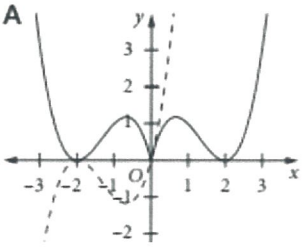
C 

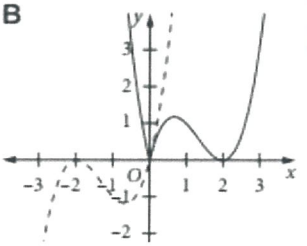
D 

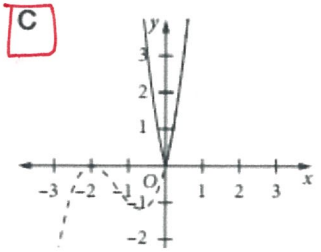
3 The graph of $y = x(x + 2)^2$ is shown.

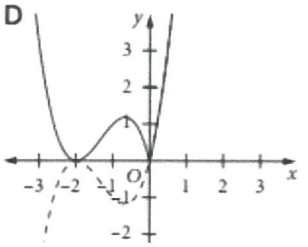


Which of the following represents the graph of $y = |x|(|x| + 2)^2$?

A 

B 

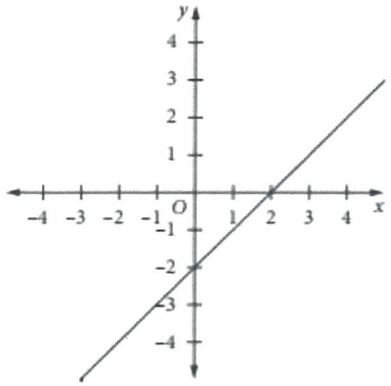
C 

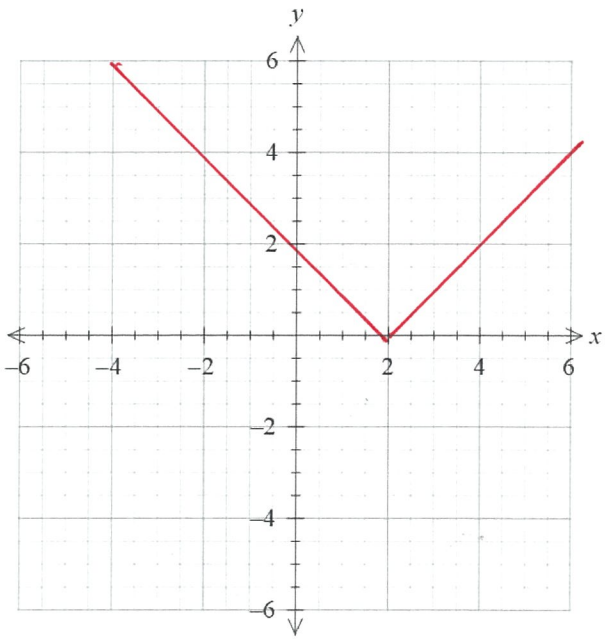
D 

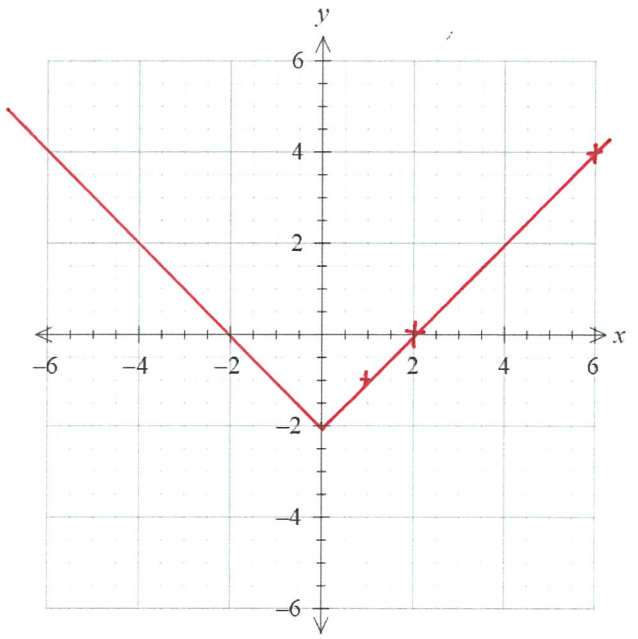
ABSOLUTE VALUE FUNCTIONS

4 Given the graph of $y = x - 2$, draw:

(a) $y = |x - 2|$ (b) $y = |x| - 2$

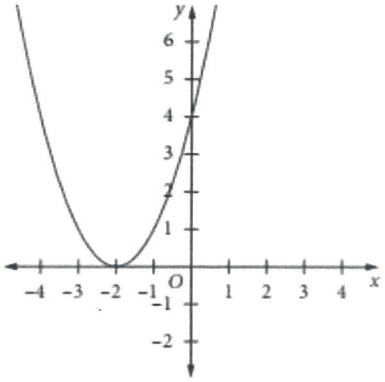


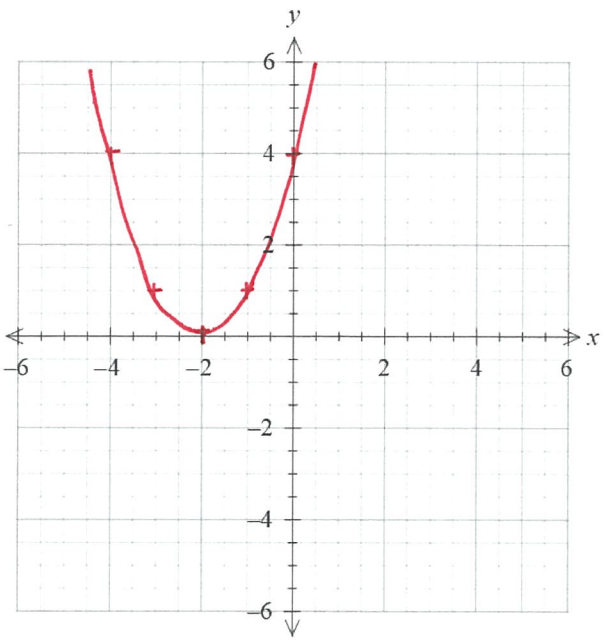


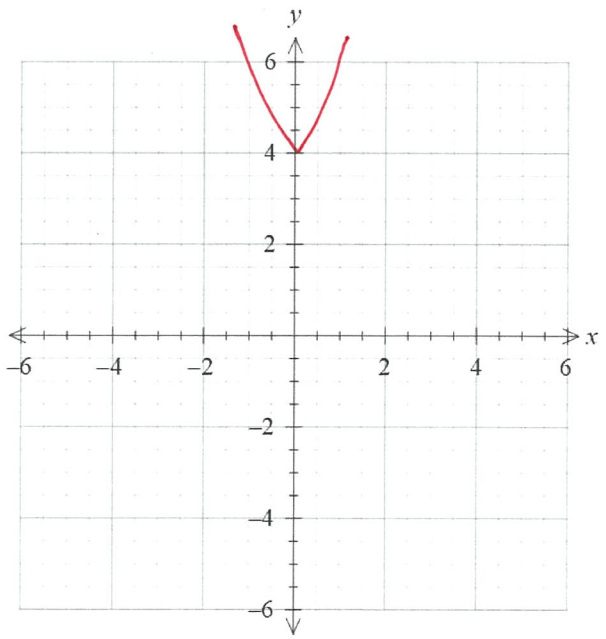


5 Given the graph of $y = (x + 2)^2$, draw:

(a) $y = |(x + 2)^2|$ (b) $y = (|x| + 2)^2$





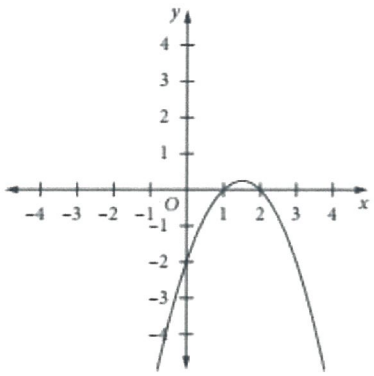


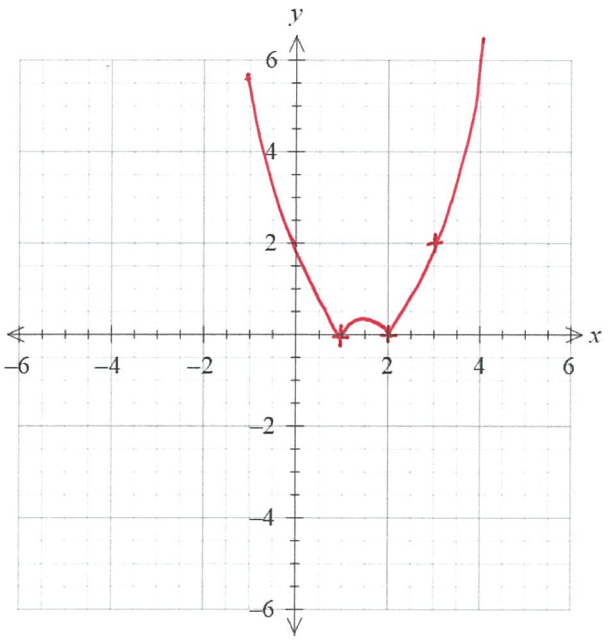
ABSOLUTE VALUE FUNCTIONS

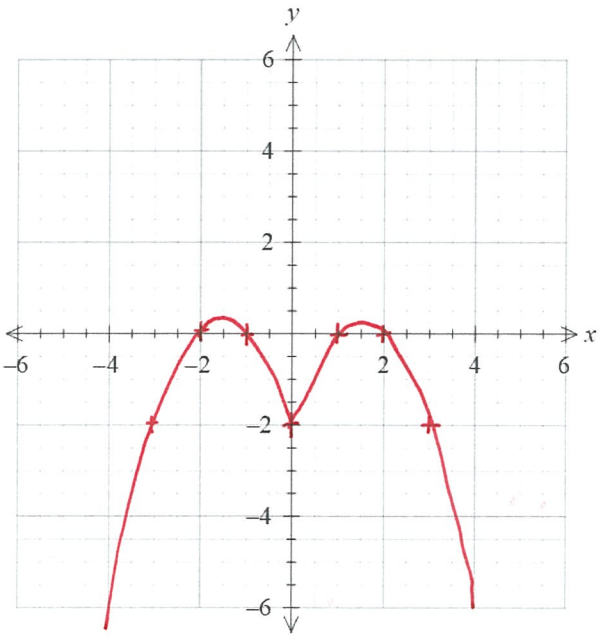
6 Given the graph of $y = (x-1)(2-x)$, draw:

(a) $y = |(x-1)(2-x)|$

(b) $y = (|x|-1)(2-|x|)$



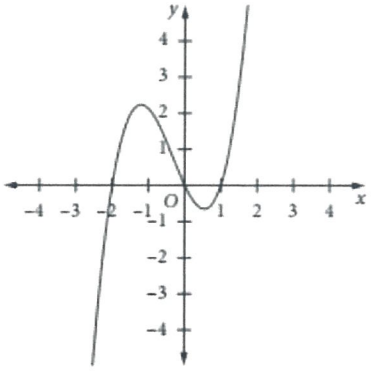


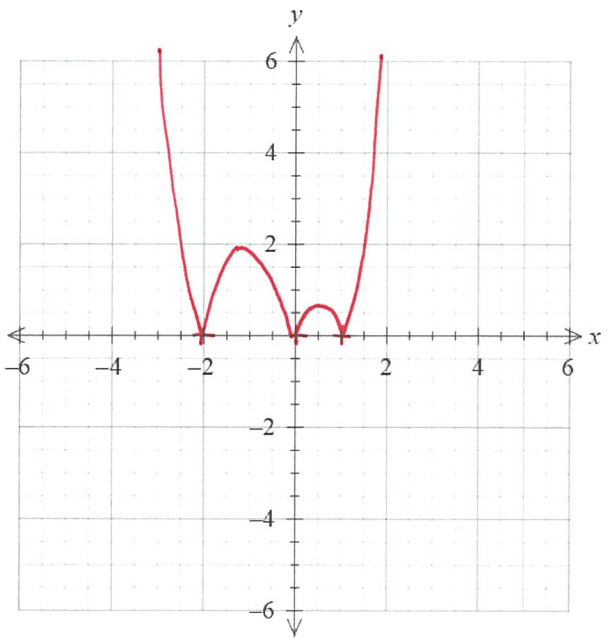


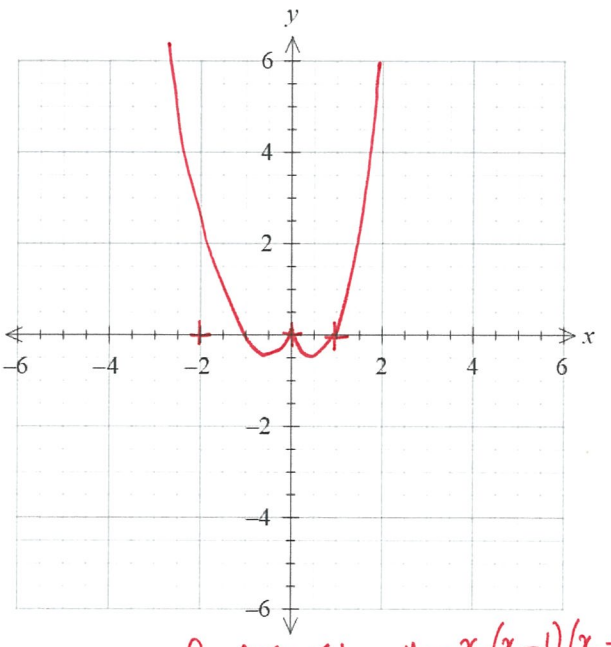
7 Given the graph of $y = x(x-1)(x+2)$, draw:

(a) $y = |x(x-1)(x+2)|$

(b) $y = |x|(|x|-1)(|x|+2)$







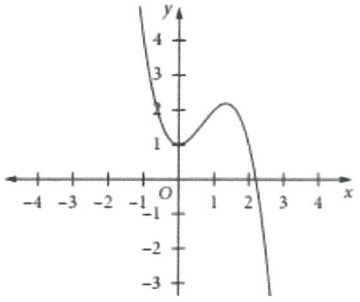
when $0 < x < 1$ $\quad y = x(x-1)(x+2)$

when $-2 < x < 0$ $\quad y = -x(-x-1)(-x+2)$

ABSOLUTE VALUE FUNCTIONS

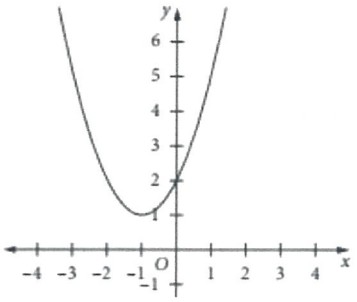
10 Given the graph of $y = -x^3 + 2x^2 + 1$, draw:

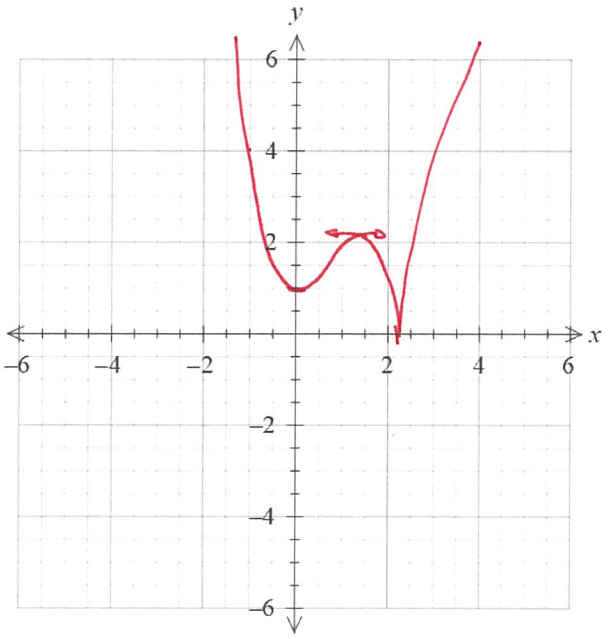
(a) $y = |-x^3 + 2x^2 + 1|$ **(b)** $y = -|x|^3 + 2|x|^2 + 1$

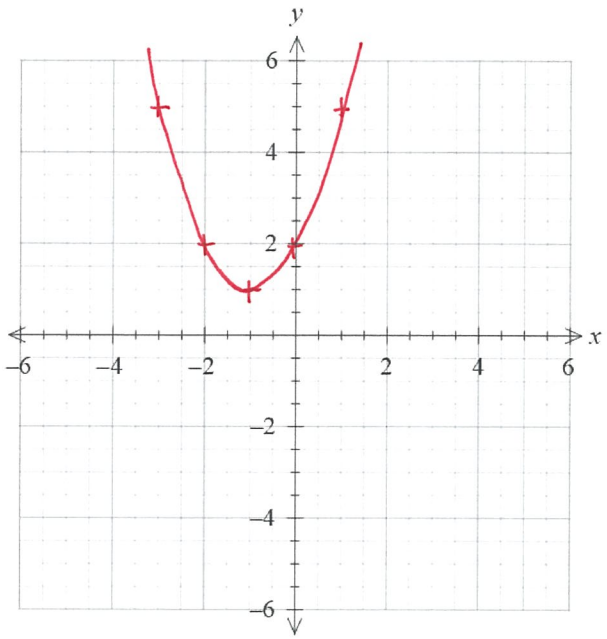


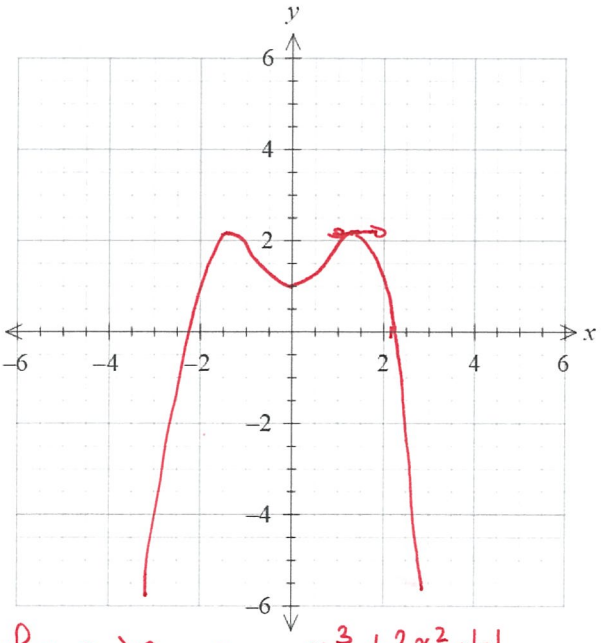
11 Given the graph of $y = x^2 + 2x + 2$, draw:

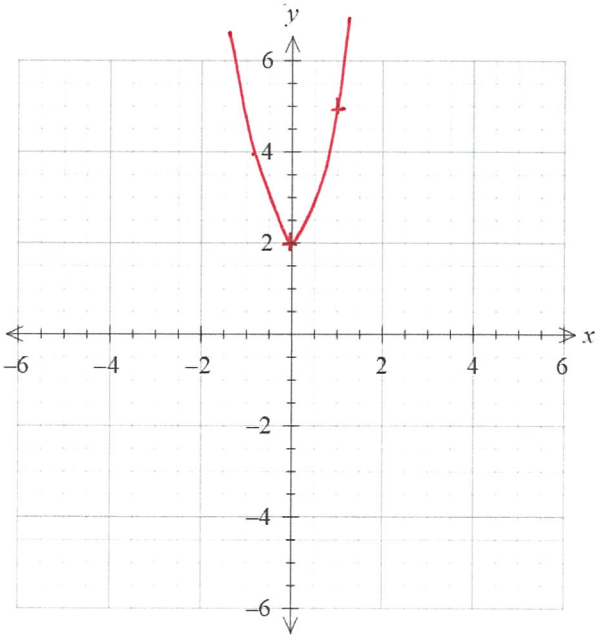
(a) $y = |x^2 + 2x + 2|$ **(b)** $y = |x|^2 + 2|x| + 2$











when $x > 0$ $y = -x^3 + 2x^2 + 1$

when $x < 0$ $y = x^3 + 2x^2 + 1$