



DERIVATIVE MATCHING

Match the functions with their derivatives and with the values of the functions and derivatives.

$f(x) = 3x^2 - 2x + 1$	$f'(x) = 8x - 3$	$f'(-1) = 9$	$f(-1) = -5$
$f(x) = x^2 - 8$	$f'(x) = 2x - 2$	$f'(2) = 10$	$f(2) = 12$
$f(x) = 3 + x - 4x^2$	$f'(x) = 2x$	$f'(-1) = -4$	$f(0) = 1$
$f(x) = x^2 - 2x - 8$	$f'(x) = 6x - 2$	$f'(1) = 5$	$f(1) = 0$
$f(x) = 4x^2 - 3x + 2$	$f'(x) = 1 - 8x$	$f'(4) = 8$	$f(3) = 1$

What does this information tell you about the graphs of the functions?

HELP

It may help to work in pairs. You have 5 functions so start by matching them with the values of the functions for the given values of x (cards in the last column). Having done that you will have 5 pairs of cards and 10 other cards.

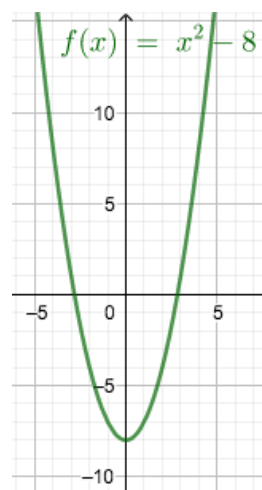
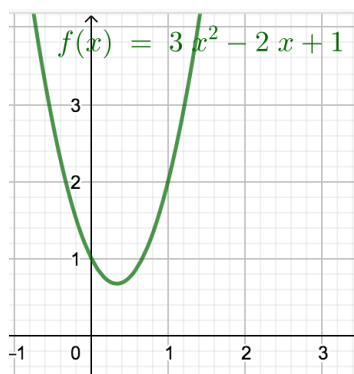
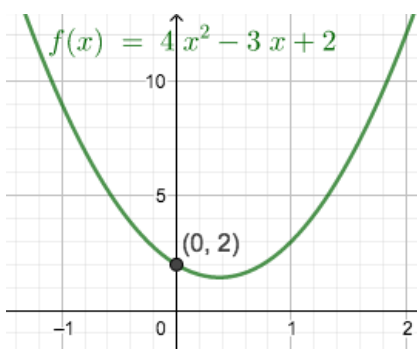
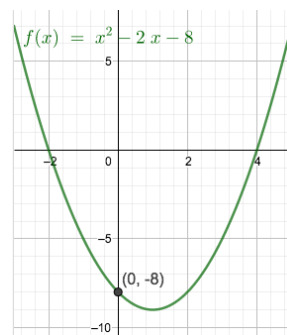
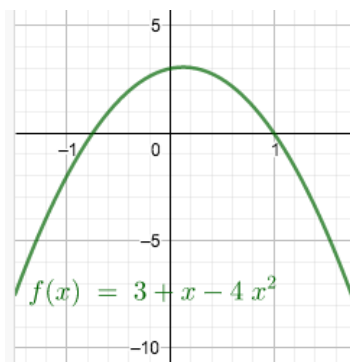
Next find the derivatives of the functions and take it from there.

You should also sketch the graphs of the functions.

NEXT

Make up more sets of cards in the same style.

$$f(x) = 3x^2 - 2x + 1$$



$$f(x) = x^2 - 8$$

$$f(x) = 3 + x - 4x^2$$

$$f(x) = x^2 - 2x - 8$$

$f(x) = 4x^2 - 3x + 2$	$f'(x) = 8x - 3$	$f'(x) = 2x - 2$
$f'(x) = 2x$	$f'(x) = 6x - 2$	$f'(x) = 1 - 8x$
$f'(-1) = 9$	$f'(4) = 8$	$f'(2) = 10$

$f'(-1) = -4$	$f'(1) = 5$	$f(-1) = -5$
$f(2) = 12$	$f(0) = 1$	$f(1) = 0$
$f(3) = 1$		