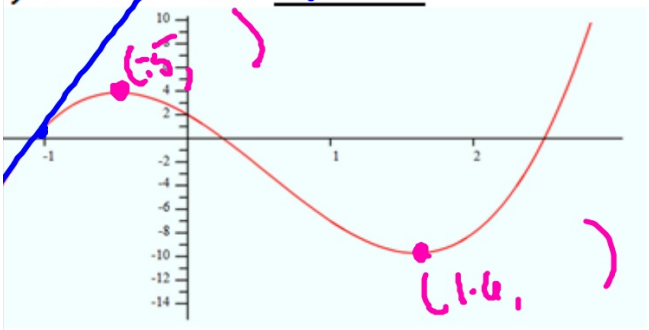
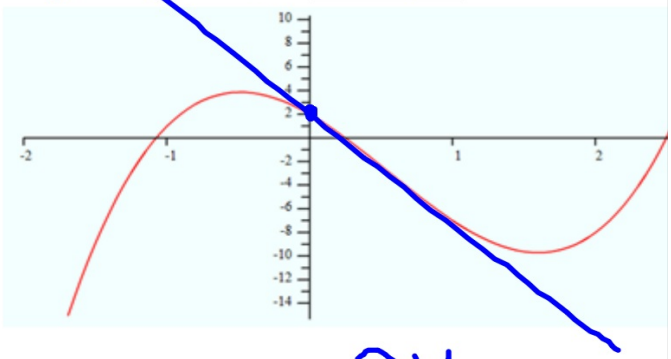
ne slope of the tangent line at the following points. Then determine
t approximate slope at each value from the options in the answer bank.

Possible Values
-7
0

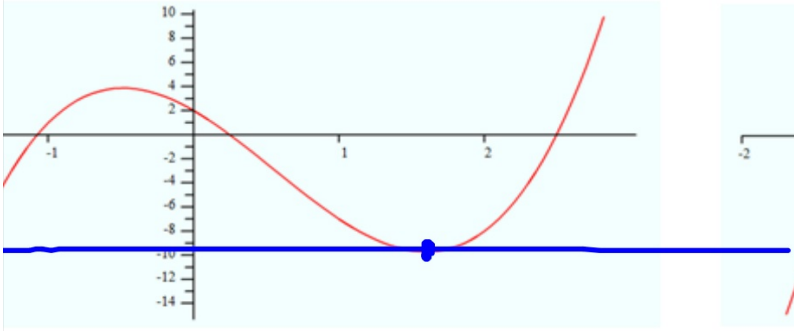
a) x = -1 m = 12



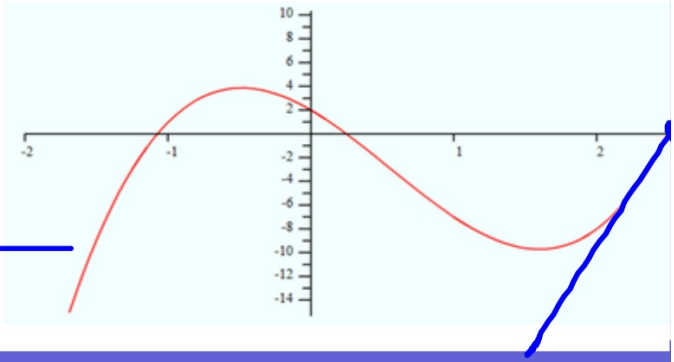
b) x = 0 m = -7



c) x = 1.6 m = 0



d) x = 2.5 m = 24



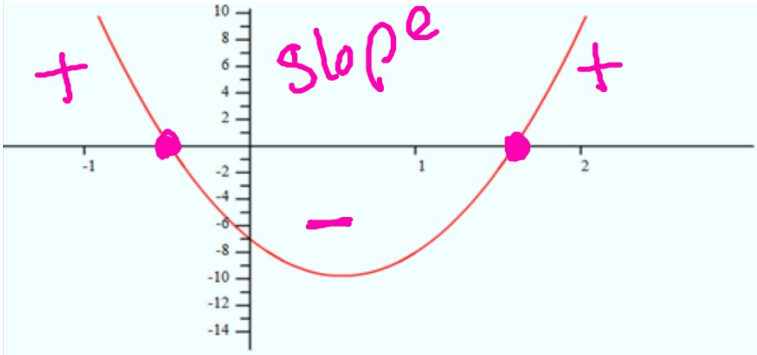
nterval notation, determine the x-values where the graph is increasing. Estimate the where it changes.

$(-\infty, -.5)(1.6, \infty)$

nterval notation, determine the x-values where the graph is decreasing. Estimate the where it changes.

$(-.5, 1.6)$

rivative is graphed below, compare the intervals above to the values of this graph.



Can any conclusion be made?

When der. is pos → or
is increasing

When der. is neg. →
original is decreas

e derv is positive, the original is increasing.

e derv is negative, the original is decreasing.

e derv is zero, the original is at a minimum or ma

e second derv is positive, the original is concave

e second derv is negative, the original is concave

e second derv is zero, the original is at a point of

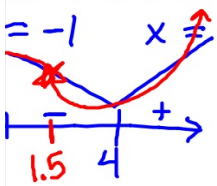
$^3 - \frac{3}{2}x^2 - 4x + 5$

$-3x - 4$

$x^2 - 3x - 4$

$(x + 1)(x - 4)$

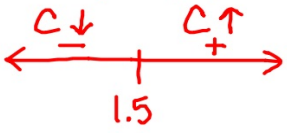
$= -1 \quad x \neq 4$



$y'' = 2x - 3$

$0 = 2x - 3$

$x = 1.5$

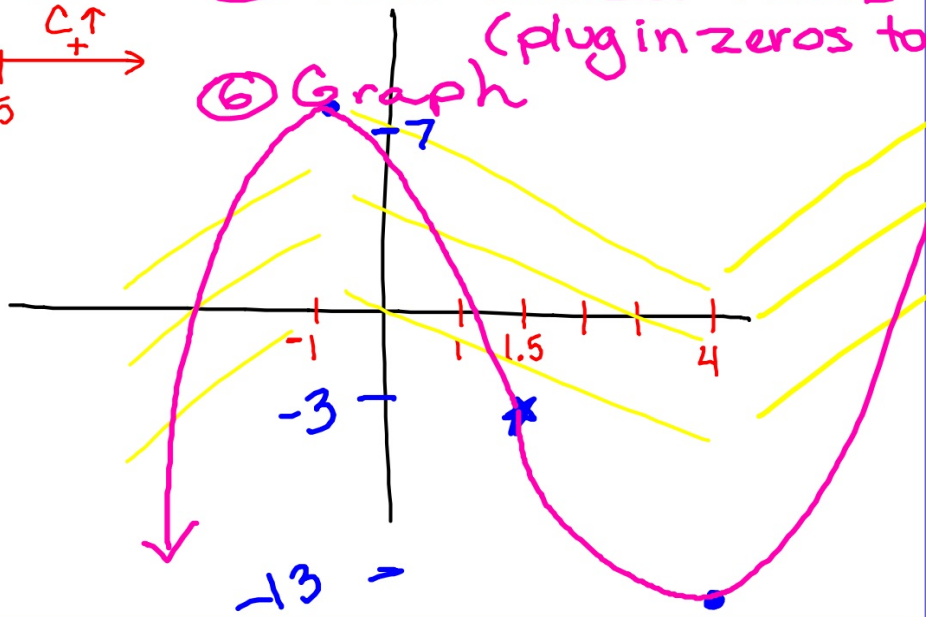


$: \frac{43}{6} = 7.167$

-3.25

-13.667

① find the derv.
② find the zeros of derv.
③ Sign Test using zero's
④ Repeat w/ 2nd Derv.
⑤ Find Critical Points (plug in zeros to
⑥ Graph



$-\frac{5}{2}x^2 - 2x + 7$

① find the derv.
② find the zeros of
③ Sign Test using
④ Repeat w/ 2nd
⑤ Find Critical P
(plug in ze
⑥ Graph