Supplementary problems for section 4.2

1.) The graph of the function $F(x) = ax^3 + bx^2 + c$ contains critical points at (-2, 5) and (0, 1). Find the values of a, b, and c.

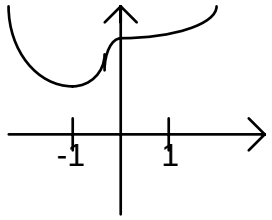
2.) Match each of the functions whose derivatives are given with one of the graphs below.

$(a.)\quad f'(x) = x(x+1)$ $\qquad$ $(d.)\quad G'(x) = x^2(x+1)^2$

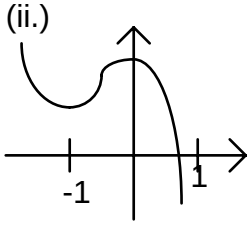
$(b.)\quad g'(x) = x^2(x+1)$ $\qquad$ $(e.)\quad h'(x) = -x(x+1)$

$(c.)\quad F'(x) = x(x+1)^2$ $\qquad$ $(f.)\quad H'(x) = -x(x+1)^2$

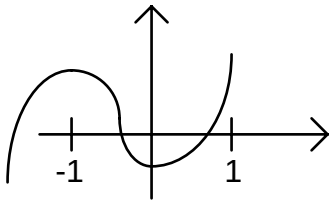
(i.)



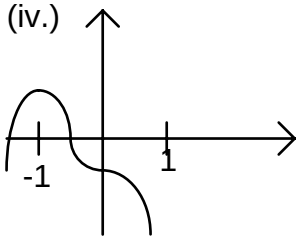
(ii.)



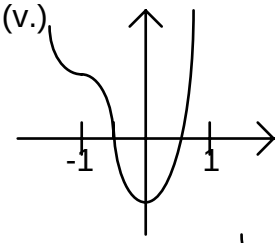
(iii.)



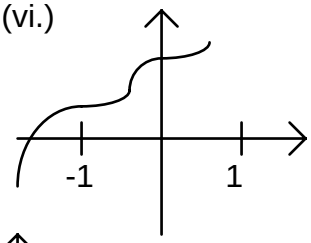
(iv.)



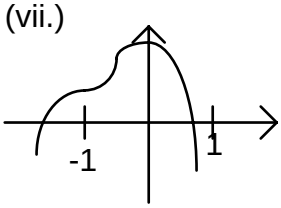
(v.)



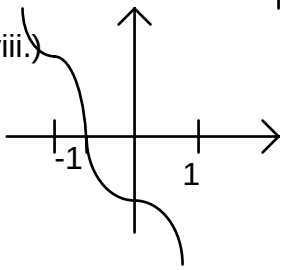
(vi.)



(vii.)



(viii.)



1.) a = 1, b =3, c =1

2.) (a.)- (iii), (b.)- (i), (c.)- (v), (d.)- (vi), (e.)-(ii), (f.)-(vii)