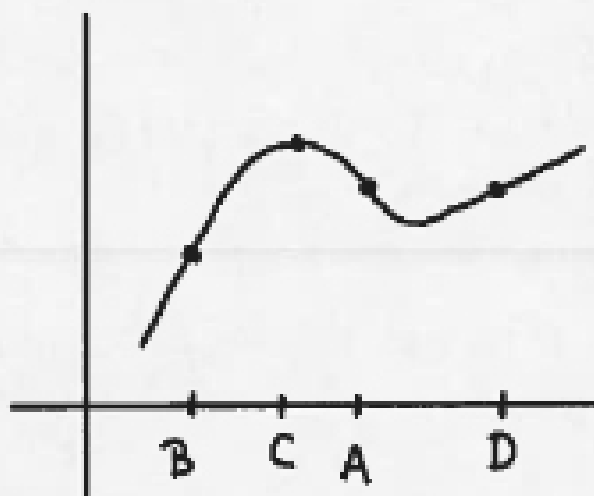
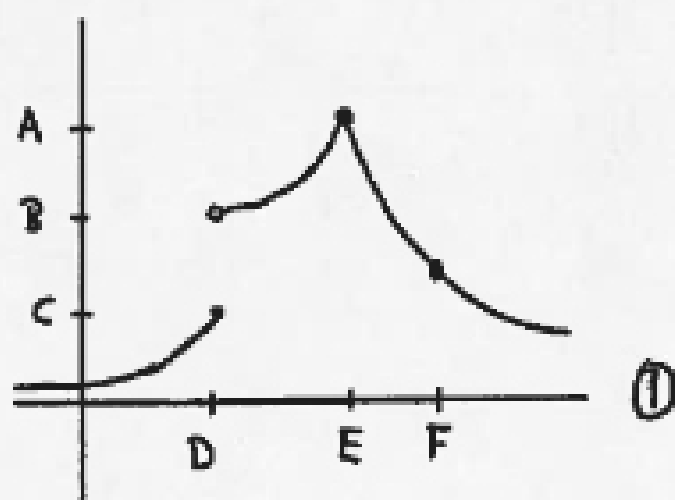


1. Order the *slopes* of the tangent lines to the graph at the indicated points:

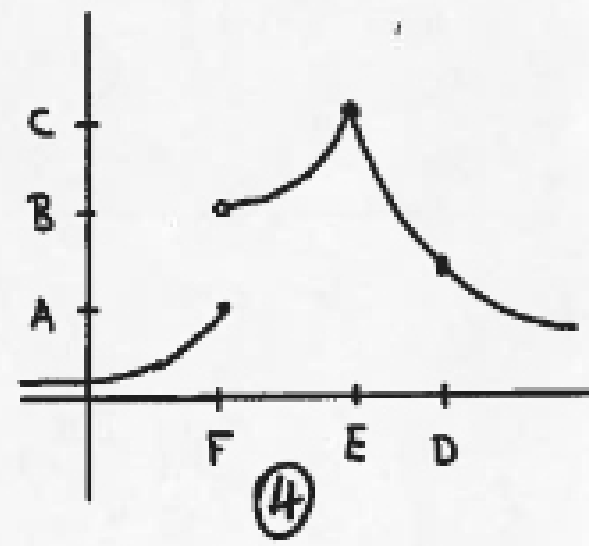
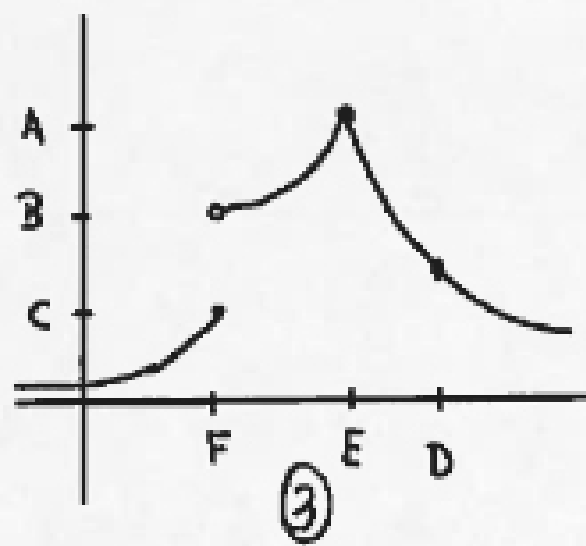
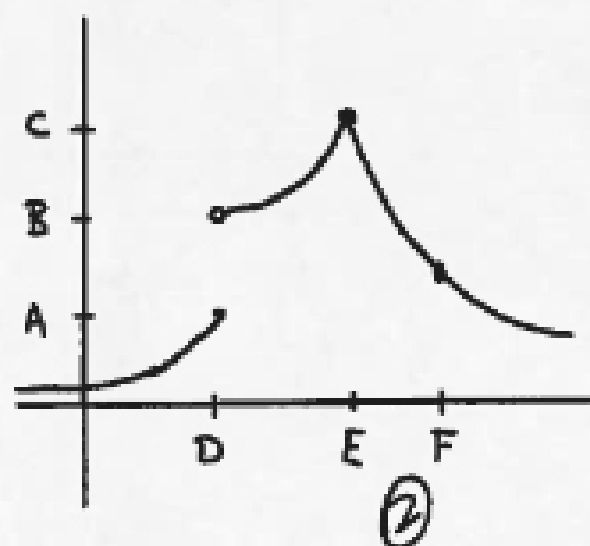
$$f'(A) < f'(C) < f'(D) < f'(B)$$



2. Answer the following question at the indicated points on the graph:



We have four graphs, denoted by ①, ②, ③ and ④ respectively.



(a) At which points if f continuous?

- ① E, F ② E, F ③ E, D ④ E, D.

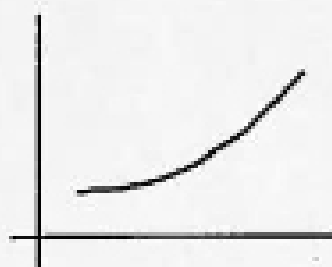
(b) At which points is f differentiable? ① F ② F ③ D ④ D.

(c) What is the value of $\lim_{x \rightarrow D^-} f(x)$ (or $\lim_{x \rightarrow F^-} f(x)$)? ① $\lim_{x \rightarrow D^-} f(x) = C$ ② $\lim_{x \rightarrow D^-} f(x) = A$.

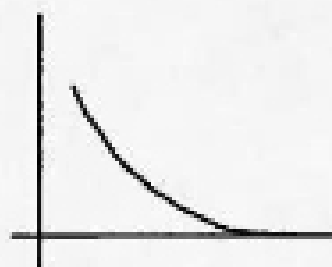
(d) What is the value of $\lim_{x \rightarrow D^+} f(x)$ (or $\lim_{x \rightarrow F^+} f(x)$)? ③ $\lim_{x \rightarrow F^-} f(x) = C$, ④ $\lim_{x \rightarrow F^-} f(x) = A$.
 ① $\lim_{x \rightarrow D^+} f(x) = B$ ② $\lim_{x \rightarrow D^+} f(x) = B$ ③ $\lim_{x \rightarrow F^+} f(x) = B$ ④ $\lim_{x \rightarrow F^+} f(x) = B$.

(e) What is the value of $\lim_{x \rightarrow E} f(x)$?
 ① A ② C ③ A ④ C.

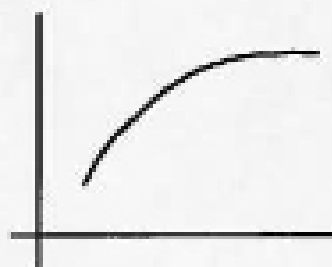
3. Which graph might *best* represent the following physical scenarios (order of graphs scrambled)?



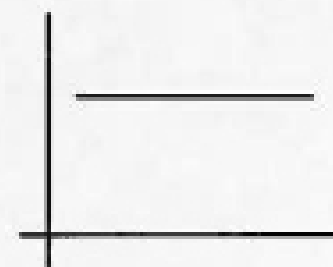
A



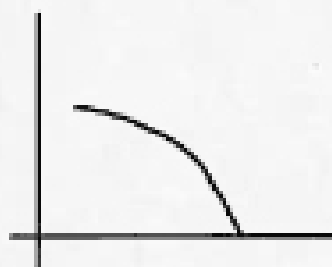
B



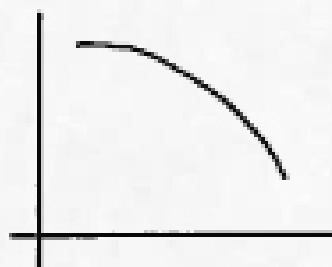
C



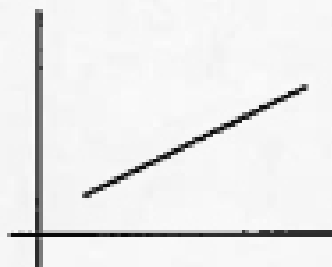
D



E



F



G



H

(a) The *position* of a car at a stop sign. D.

(b) The *position* of a car coming to a stop. C

(c) The *velocity* of a car coming to a stop. B

- (d) The *position* of a car leaving a stop sign. H / A
- (e) The *velocity* of a car leaving a stop sign. H
- (f) The *position* of a car traveling on the expressway. G
- (g) The *velocity* of a car traveling on the expressway. D