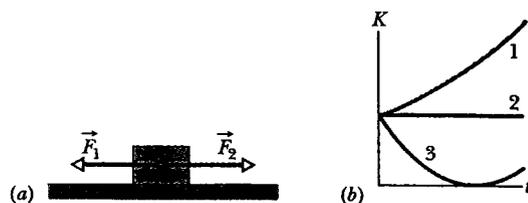


2 Figure 7-15a shows two horizontal forces that act on a block that is sliding to the right across a frictionless floor. Figure 7-15b shows three plots of the block's kinetic energy K versus time t . Which of the plots best corresponds to the following three situations: (a) $F_1 = F_2$, (b) $F_1 > F_2$, (c) $F_1 < F_2$?

Fig. 7-15
Question 2.



4 In three situations, a briefly applied horizontal force changes the velocity of a hockey puck that slides over frictionless ice. The overhead views of Fig. 7-16 indicate, for each situation, the puck's initial speed v_i , its final speed v_f , and the directions of the corresponding velocity vectors. Rank the situations according to the work done on the puck by the applied force, most positive first and most negative last.

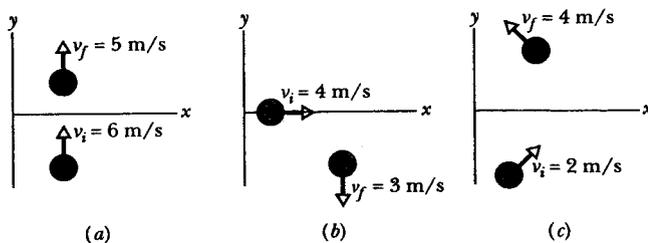


Fig. 7-16 Question 4.

5 Figure 7-17 shows four graphs (drawn to the same scale) of the x component F_x of a variable force (directed along an x axis) versus the position x of a particle on which the force acts. Rank the graphs according to the work done by the force on the particle from $x = 0$ to $x = x_1$, from most positive work first to most negative work last.

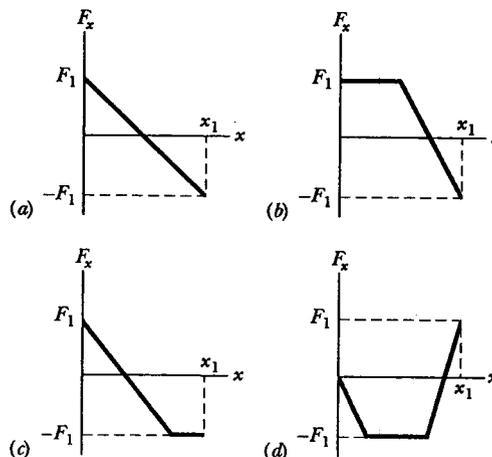


Fig. 7-17 Question 5.

7 In Fig. 7-19, a greased pig has a choice of three frictionless slides along which to slide to the ground. Rank the slides according to how much work the gravitational force does on the pig during the descent, greatest first.

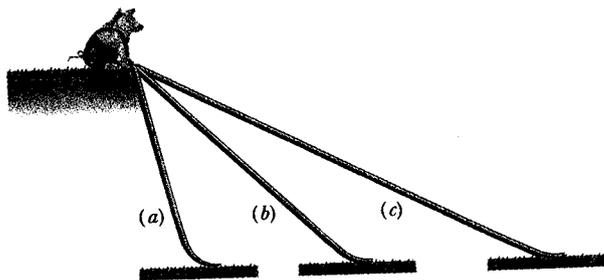


Fig. 7-19 Question 7.

10 A glob of slime is launched or dropped from the edge of a cliff. Which of the graphs in Fig. 7-21 could possibly show how the kinetic energy of the glob changes during its flight?

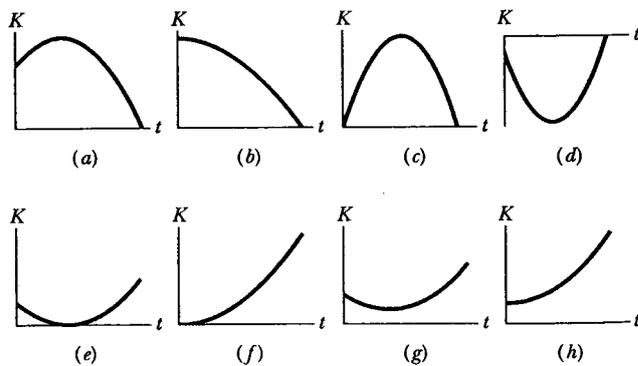


Fig. 7-21 Question 10.