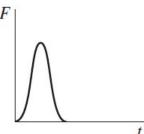
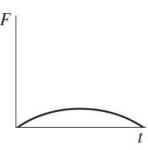
1.

An object experiences a varying force as shown in the following F-t graphs. Which graph shows the largest change in momentum?

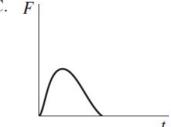
A.



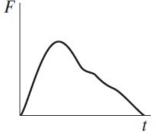
B.



C.



D. F



2.

A 7.3×10^3 kg space vehicle and its empty 6.8×10^2 kg booster unit are moving together through space at 370 m/s. An explosion lasting 2.2 s is used to separate the two parts. If the speed of the space vehicle after the separation is increased to 430 m/s, what impulse acted on the booster unit?

A.
$$4.1 \times 10^4 \text{ N} \cdot \text{s}$$

B.
$$2.0 \times 10^5 \text{ N} \cdot \text{s}$$

C.
$$2.2 \times 10^5 \text{ N} \cdot \text{s}$$

D.
$$4.4 \times 10^5 \text{ N} \cdot \text{s}$$