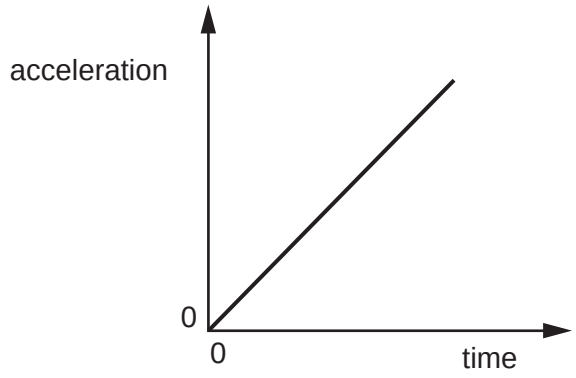
ACCELERATION OF FREE FALL

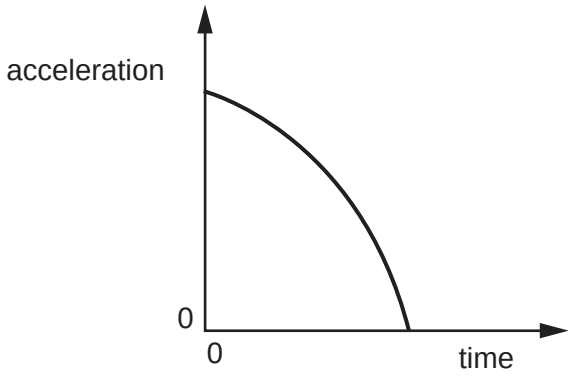
A stone falls freely from the top of a cliff into the sea. Air resistance may be ignored.

Which graph shows how the acceleration of the stone varies with time as it falls?

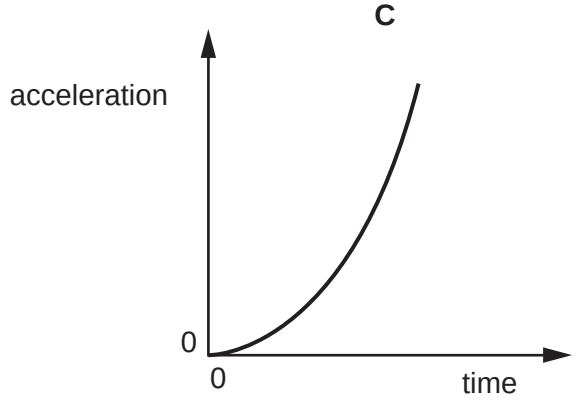
A



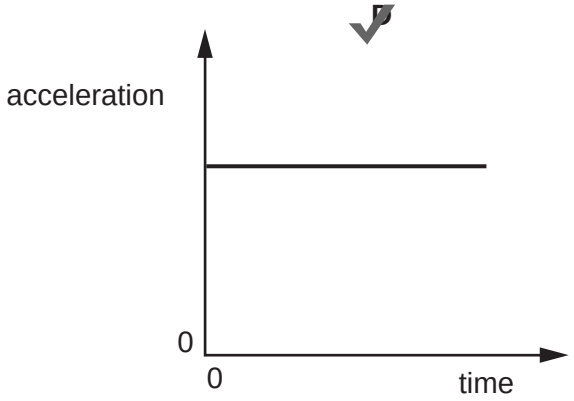
B



C



D ✓



Two stones of different weight fall at the same time from a table. Air resistance may be ignored.

What will happen and why?

	what will happen	why
A ✓	both stones hit the floor at the same time	acceleration of free fall is constant
B	both stones hit the floor at the same time	they fall at constant speed
C	the heavier stone hits the floor first	acceleration increases with weight
D	the heavier stone hits the floor first	speed increases with weight

A small steel ball is dropped from a low balcony.

Ignoring air resistance, which statement describes its motion?

A It falls with constant acceleration.

B It falls with constant speed.

C It falls with decreasing acceleration.

D It falls with decreasing speed.

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