6 What gives the value of a body's acceleration?

A the area under its displacement-time graph

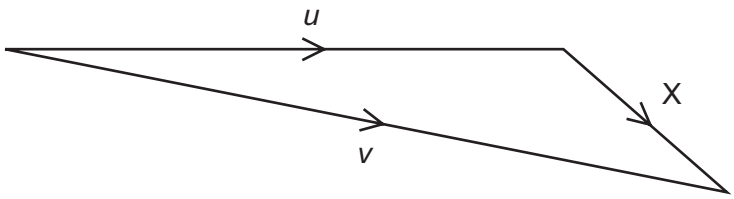
B the area under its velocity-time graph

C the gradient of its displacement-time graph

D the gradient of its velocity-time graph

7 An object has an initial velocity u. It is subjected to a constant force F for t seconds, causing a constant acceleration a. The force is **not** in the same direction as the initial velocity.

A vector diagram is drawn to find the final velocity v.



What is the length of side X of the vector diagram?

A F **B** Ft **C** at **D** $u + at$

8 A stone is dropped from the top of a tower of height 40 m. The stone falls from rest and air resistance is negligible.

What time is taken for the stone to fall the last 10 m to the ground?

A 0.38 s **B** 1.4 s **C** 2.5 s **D** 2.9 s

9 What is meant by the weight of an object?

A the gravitational field acting on the object

B the gravitational force acting on the object

C the mass of the object multiplied by gravity

D the object's mass multiplied by its acceleration