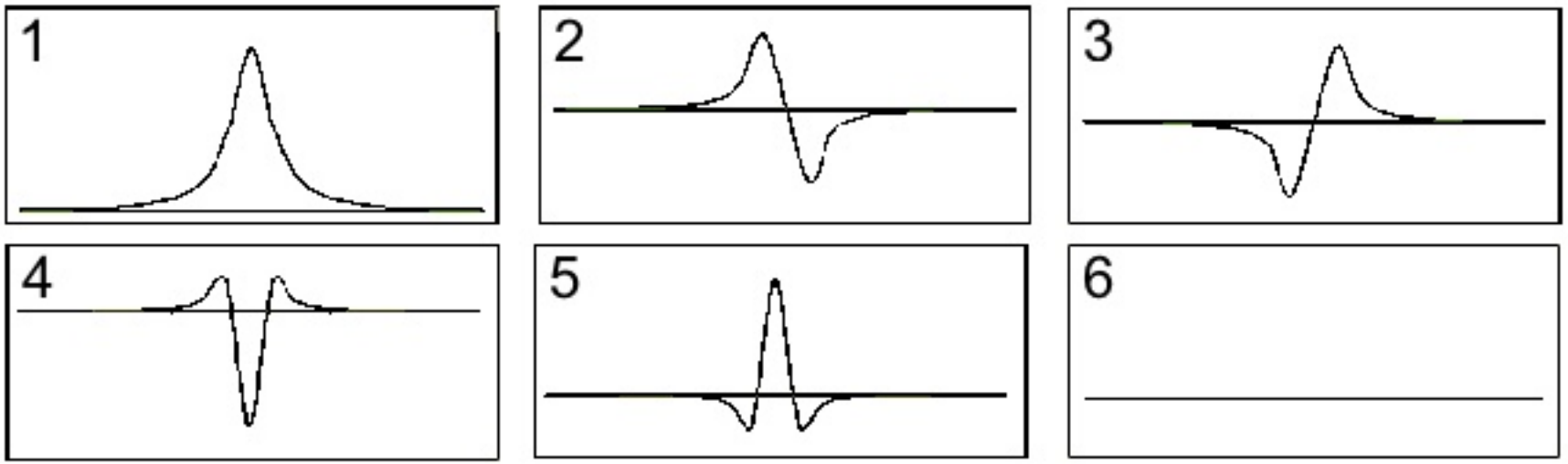
A pulse is started on the string moving to the right. At a time t_0 a photograph of the string would look like figure 1 below. A point on the string to the right of the pulse is marked by a spot of paint.
(x is horizontal and right, y is vertical and up)

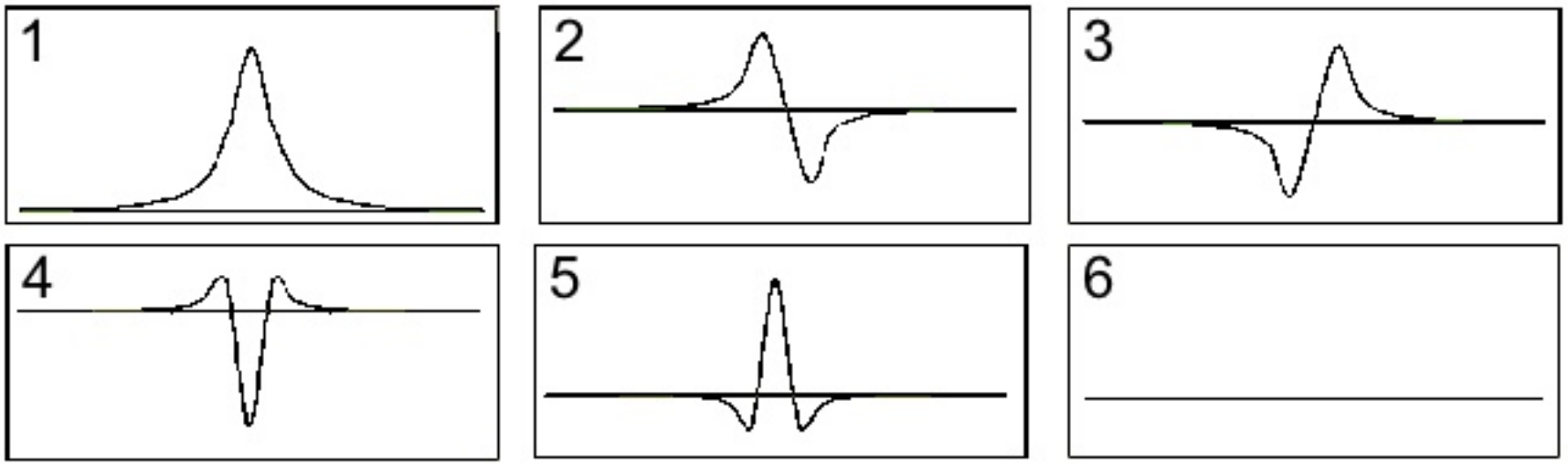
Which graph would look most like a graph of the **x velocity** of the spot as a function of time?



7 None of these

A pulse is started on the string moving to the right. At a time t_0 a photograph of the string would look like figure 1 below. A point on the string to the right of the pulse is marked by a spot of paint.
(x is horizontal and right, y is vertical and up)

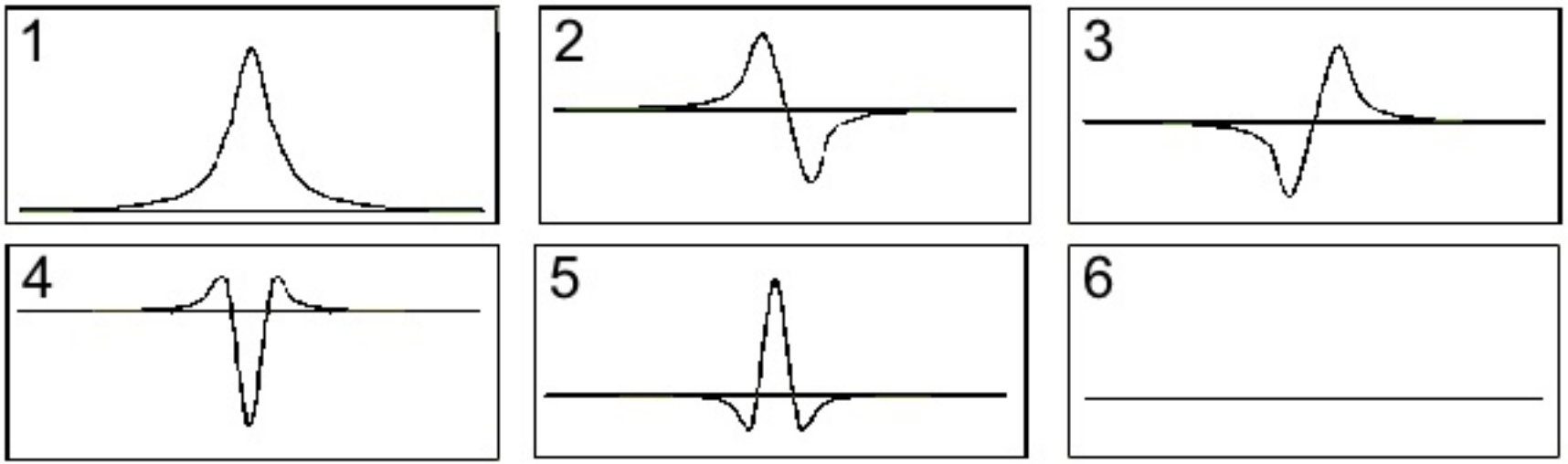
Which graph would look most like a graph of the **y velocity** of the spot as a function of time?



7 None of these

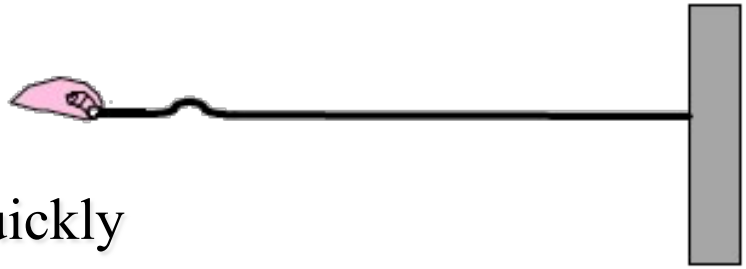
A pulse is started on the string moving to the right. At a time t_0 a photograph of the string would look like figure 1 below. A point on the string to the right of the pulse is marked by a spot of paint.
(x is horizontal and right, y is vertical and up)

Which graph would look most like a graph of the **y force** on the spot as a function of time?



7 None of these

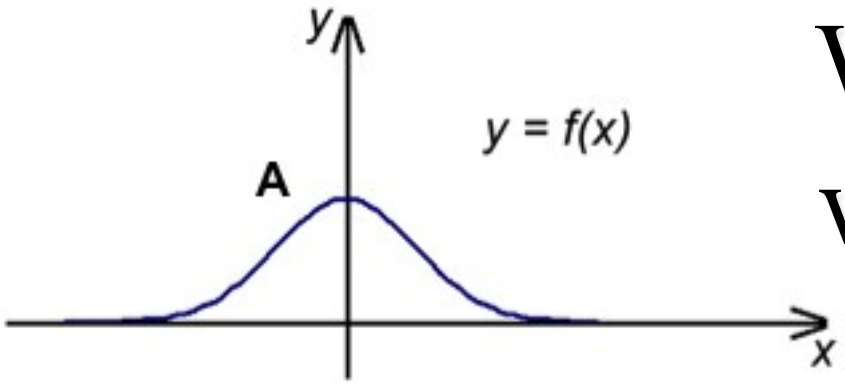
What Controls the Speed of the Pulse on a Spring?

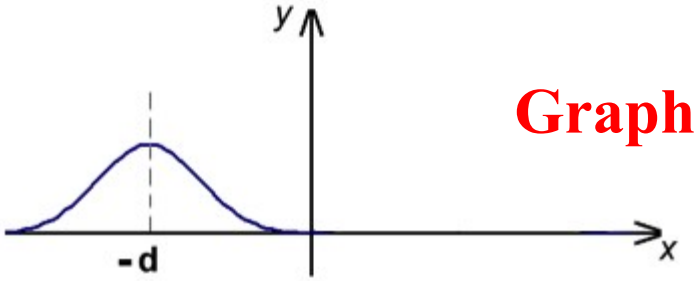


To make the pulse go to the wall faster

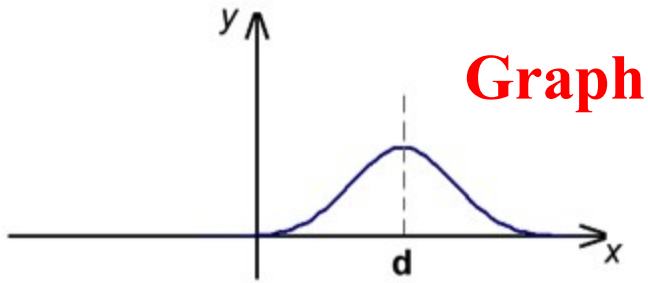
1. Move your hand up and down more quickly (but by the same amount).
2. Move your hand up and down more slowly (but by the same amount).
3. Move your hand up and down a larger distance in the same time.
4. Move your hand up and down a smaller distance in the same time.
5. Use a heavier string of the same length under the same tension.
6. Use a string of the same density but decrease the tension.
7. Use a string of the same density but increase the tension.
8. Put more force into the wave,
9. Put less force into the wave.

Which goes with which?

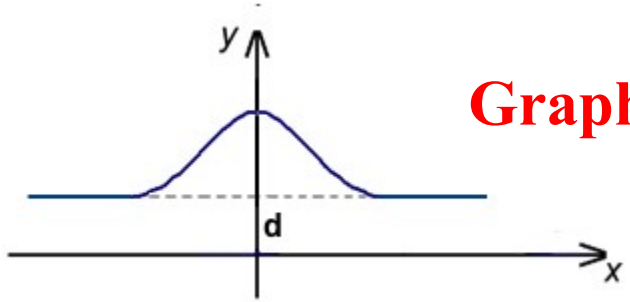




Graph I



Graph II



Graph III

1. $y = f(x+d)$
2. $y = f(x-d)$
3. $y = f(x)+d$
4. $y = f(x)-d$
5. You can't tell if you don't know the form of f.
6. You can't tell for some other reason.

Suppose a pulse with the shape $y = f(x)$ at $t = 0$. Which equation correctly represents the pulse at the time t if it is moving in the positive direction with a speed v_0?

1. $y = f(x + v_0 t)$
2. $y = f(x - v_0 t)$
3. $y = f(x) + v_0 t$
4. $y = f(x) - v_0 t$
5. Something else.