0 6 Jade investigates how high her spring toy jumps when released.

Figure 4

0 6 . 1 Jade compresses the spring of her toy as low as she can. Then, she lets go. The toy jumps in the air and reaches its highest point before falling back down.

Complete the sentences to describe the energy changes.

Use answers from the box.

[4 marks]

elastic potential	kinetic	has emptied	is full
thermal	gravitational potential	sound	

When the spring is fully compressed the elastic potential energy store

_____.

When the toy has reached its highest point the _____ energy store is full and the _____ energy store has emptied.

Some of the initial energy has increased the _____ energy store associated with the surroundings.

0 6 . 2 The spring can be compressed by 3 cm.

The spring constant of the spring in the toy is 70 N/m.

Choose the correct equation from the Physics Formula Sheet to calculate the initial energy stored by the spring.

[4 marks]

_____

_____

_____

_____

_____

_____

Initial energy stored = _____ J