A bulldog on a skateboard is sitting at the bottom of a 2 m dip. How much KE do you have to give them so they will roll out of the dip? The bulldog and skateboard combined have a mass of 20 kg. Friction and air drag can be ignored.

- 1. None
- 2. About 400 Joules
- 3. About 600 Joules
- 4. You can't tell from the information given.



A bulldog on a skateboard is sitting at the bottom of a 2 m dip. What is their total mechanical energy? The bulldog and skateboard combined have a mass of 20 kg. Friction and air drag can be ignored.

- 1. Zero
- 2. About 400 Joules
- 3. About 200 Joules
- 4. You can't tell from the information given.





A bulldog on a skateboard is sitting at the bottom of a 2 m dip. How much KE do you have to give them so they will roll out of the dip? The bulldog and skateboard combined have a mass of 20 kg. Friction and air drag can be ignored.

- 1. None
- 2. About 400 Joules
- 3. About 600 Joules
- 4. You can't tell from the information given.



A bulldog on a skateboard is sitting at the bottom of a 2 m dip. What is their total mechanical energy? The bulldog and skateboard combined have a mass of 20 kg. Friction and air drag can be ignored.

- 1. Zero
- 2. About 400 Joules
- 3. About -400 Joules
- 4. You can't tell from the information given.





A spring-loaded toy dart gun is used to shoot a dart straight up in the air, and the dart reaches a maximum height of 24 m. The same dart is shot straight up a second time from the same gun, but this time the spring is compressed only half as far before firing. How far up does the dart go this time, neglecting friction and air resistance and assuming an ideal spring?

- 1. 96 m
- 2. 48 m
- 3. 24 m
- 4. 12 m
- 5. 6 m
- 6. 3 m

 $_{11/20/15}$ 7. Something else Physics 131



