

The kinetic energy of an 1800-kg truck is 7.2×10^5 J. What is the speed of the truck?

The kinetic energy of the body equals:

$$T = \frac{mv^2}{2}$$

where m - mass of the body, v – speed of the body.

Therefore, speed equals:

$$\frac{2T}{m} = v^2$$
$$v = \sqrt{\frac{2T}{m}} = \sqrt{\frac{2 * 7.2 * 10^5 J}{1800 kg}} = 28 \frac{m}{s}$$

Answer: $28 \frac{m}{s}$