

## KINETIC ENERGY W/ SPEED AND WEIGHT

Find a Kinetic Energy with Speed and Weight or Speed and Mass.

**CASE NUMBER:** Kinetic Energy of 5,000 lb vehicle

3/2/2023

$$KE = \frac{W \times S^2}{30}$$

$$KE = \frac{5000.00 \times 25.00^2}{30}$$

$$KE = \frac{5000.00 \times 625.00}{30}$$

$$KE = \frac{3125000.00}{30}$$

KE = The Kinetic Energy in ft-lbs or Joules.  
W = The Weight in pounds.  
S = The Speed in mph/kph.  
30 = A Constant.

$$KE = 104166.66$$

### Formula Inputs:

The Weight in pounds is:  
The Speed in mph is:

5000.00  
25.00

### Formula Results:

The Kinetic Energy (ft-lb or Joules) is: 104166.66

### Incrementation Results

<u>Speed</u>	<u>K Energy</u>	<u>Speed</u>	<u>K Energy</u>	<u>Speed</u>	<u>K Energy</u>
25.00	104166.66	46.00	352666.66		

248,500 ft lbs more energy.  
@ 21 mph over

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**CASE NUMBER:** Kinetic Energy of 5,000 lb vehicle

3/2/2023

$$KE = \frac{W \times S^2}{30}$$

$$KE = \frac{5000.00 \times 65.00^2}{30}$$

$$KE = \frac{5000.00 \times 4225.00}{30}$$

$$KE = \frac{21125000.00}{30}$$

*KE = The Kinetic Energy in ft-lbs or Joules.  
 W = The Weight in pounds.  
 S = The Speed in mph/kph.  
 30 = A Constant.*

$KE = 704166.66$

**Formula Inputs:**

**Formula Results:**

The Weight in pounds is: 5000.00  
 The Speed in mph is: 65.00

The Kinetic Energy (ft-lb or Joules) is: 704166.66

**Incrementation Results**

<u>Speed</u>	<u>K Energy</u>	<u>Speed</u>	<u>K Energy</u>	<u>Speed</u>	<u>K Energy</u>
65.00	704166.66	86.00	1232666.66		

528,500 ft lbs more energy.  
 @ 21 mph over

## KINETIC ENERGY W/ SPEED AND WEIGHT

Find a Kinetic Energy with Speed and Weight or Speed and Mass.

**CASE NUMBER:** Kinetic Energy of 5,000 lb vehicle

3/2/2023

$$KE = \frac{W \times S^2}{30}$$

$$KE = \frac{5000.00 \times 25.00^2}{30}$$

$$KE = \frac{5000.00 \times 625.00}{30}$$

$$KE = \frac{3125000.00}{30}$$

*KE = The Kinetic Energy in ft-lbs or Joules.  
 W = The Weight in pounds.  
 S = The Speed in mph/kph.  
 30 = A Constant.*

$KE = 104166.66$

**Formula Inputs:**

**Formula Results:**

The Weight in pounds is: 5000.00  
 The Speed in mph is: 25.00

The Kinetic Energy (ft-lb or Joules) is: 104166.66

**Incrementation Results**

<u>Speed</u>	<u>K Energy</u>	<u>Speed</u>	<u>K Energy</u>	<u>Speed</u>	<u>K Energy</u>
25.00	104166.66 (45833)	60.00	600000.00	95.00	1504166.66
30.00	150000.00	65.00	704166.66	100.00	1666666.66
35.00	204166.66	70.00	816666.66	105.00	1837500.00
40.00	266666.66	75.00	937500.00	110.00	2016666.66
45.00	337500.00	80.00	1066666.66	115.00	2204166.66
50.00	416666.66 (87500)	85.00	1204166.66	120.00	2400000.00
55.00	504166.66	90.00	1350000.00		