The formula for calculating speed is

***YOU MUST SHOW YOUR WORK. You can use a calculator but you must show all of the steps involved in doing the problem.***

|  |  |
| --- | --- |
| **Speed** | |
| **In 2009 Usain Bolt set the 100M world record covering the distance in 9.58 seconds.**  **What was his average speed over the 100m?** | http://static.sportskeeda.com/wp-content/uploads/2015/08/gold2-1439703473-800.jpg |
| [**https://www.youtube.com/watch?v=3nbjhpcZ9\_g**](https://www.youtube.com/watch?v=3nbjhpcZ9_g) |
| Answer: | |
| **In 1998 Florence Griffith-Joyner set the Women’s 100m world record covering the distance in 10.49 seconds.**  **What was her average speed over the 100m?** | http://l1.yimg.com/bt/api/res/1.2/QG0ZHHT1WweUhMRvmHVccA--/YXBwaWQ9eW5ld3NfbGVnbztmaT1maWxsO2g9MzAwO2lsPXBsYW5lO3E9NzU7dz0zMDA-/http:/media.zenfs.com/en_us/News/afp.com/4b2d3d49d86b7df18118e2d25eb17df031df4745.jpg |
| [**https://www.youtube.com/watch?v=Mrt9yZL8dbI**](https://www.youtube.com/watch?v=Mrt9yZL8dbI) |
| Answer: | |

|  |  |  |
| --- | --- | --- |
| **Time** | | |
| **How long would it take a Greenpower car travelling at 50kph to travel around the Rockingham Speedway in the UK (the oval circuit)?**  **The answer should be given in metres per second (m/s), kilometres per hour (km/h), and miles per hour (mph).** | | http://www.sg.polsl.pl/sg_joomla/images/newsy/rockingham.jpg |
| You will need to visit the following link to get the distance around the oval circuit. [**https://en.wikipedia.org/wiki/Rockingham\_Motor\_Speedway**](https://en.wikipedia.org/wiki/Rockingham_Motor_Speedway) | | |
| Answer: | | |
| **Bloodhound SSC aims to break the 1,000mph barrier. The world record attempt will measure the average speed over a “measured mile”.**  **What is 1,000mph in km/h?**  **What is a mile in km?** | http://www.atkinsglobal.com/~/media/Images/A/Atkins-Corporate/projects/header-banner/bloodhound-4.jpg?h=526&la=en-GB&w=1288 | |
| [**www.bloodhoundssc.com**](http://www.bloodhoundssc.com)  [**https://en.wikipedia.org/wiki/Land\_speed\_record**](https://en.wikipedia.org/wiki/Land_speed_record) | |
| **How long will it take Bloodhound to travel the measured mile if it’s travelling at 1,000mph?**  Convert into m/s and metres and then calculate the answer. | | |
| Answers: | | |

|  |
| --- |
| **Time** |
| **How long would it take you to cycle from your house to your school if you travelled at an average speed of 15km/h?**  **Use Google Maps to find the distance from your house to school. Use the Get Directions option.** |
| Answers:  The distance from my house to school is \_\_\_\_\_\_metres  Cycling at an average speed of 15km/h it will take me \_\_\_\_minutes and \_\_\_\_ seconds to travel from home to school. |

|  |  |
| --- | --- |
| **Distance** | |
| **Calculate the distance from the Earth to the Moon.**  **Watch the YouTube clip from the Big Bang Theory.**  <https://www.youtube.com/watch?v=-e5CtbbZL-k> |  |
| **The speed of light in a vacuum is 299,792,458 m/s** | |
| In the YouTube clip how long did it take the light from the laser to travel from the Earth to the Moon and back to Earth?  Answer: \_\_\_\_\_\_\_\_\_\_ seconds  Using this information calculate the distance from the Earth to the Moon in km.  Answer: | |