1. In 1998 there were 1 496 000 people unemployed in Britain. Write this number in standard form.
2. There are 7.2 × 109 pennies in circulation, although 2.1 × 109 of them are missing. Write these numbers out in full.
3. The Black Death killed 75,000,000 people between 1347 and 1351. Write this number in standard form.
4. The average bucket of sand on the beach contains 3 180 000 000 grains of sand. Write this number in standard form.
5. Northwest Scotland, Anglesey and the Malvern Hills contain rock that is 2.6 × 109 years old. Write this number out in full.
6. The following table shows some of the prehistoric periods of the world, and how long ago they existed. What numbers should go in the blank cells?

|  |  |  |
| --- | --- | --- |
| **Period** | **Years Ago (Ordinary)** | **Years Ago (Standard Form)** |
| Cretaceous | 70 000 000 to 135 000 000 |  |
| Jurassic |  | 1.35 × 108 to 1.8 × 108 |
| Devonian | 350 000 000 to 400 000 000 |  |
| Silurian |  | 4 × 108 to 4.4 × 108 |
| Cambrian | 500,000,000 to 600,000,000 |  |
| Pre-Cambrian |  | > 6 × 108 |

1. The Earth’s crust is estimated to be 4.5 × 109 years old. Write this in full.
2. What numbers should go in the blank cells?

|  |  |  |
| --- | --- | --- |
| **Planet** | **Miles from Sun (Ordinary)** | **Miles from Sun (Standard form)** |
| Mercury | 35 990 000 |  |
| Venus |  | 6.724 × 107 |
| Earth | 93 000 000 |  |
| Jupiter |  | 4.8388 × 108 |
| Neptune |  | 2.7955 × 109 |
| Pluto | 3 667 900 000 |  |

1. The smallest freshwater fish, the dwarf pygmy goby, weighs between 0.000 14 ounces and 0.000 18 ounces. Write these weights in standard form.
2. The National Tortoise Championship speed record is 4.5 × 10 –1 km/h. Write this in full.
3. The ai (three-toed sloth) has a ground speed of 0.13 km/h, but in trees accelerates to 0.27 km/h. Write these figures in standard form.
4. The largest virus, *Citrus Tristeza*, measures 2 × 10 –5 metres across. The smallest virus, *Tobacco Necrosis*, measures 1.7 × 10 –10 metres in length. Write these figures in normal form.