**Games Of Cones – Season 2 – Rounding and Estimation - Answers**

The city of Easteros, situated on the coast of Wessos, is the scene of a bitter ice cream feud between two companies:

**Lark Ices** (run by Edward Lark)

**Stannister Dairy** (run by Bob Stannister)

Both men, through their companies, are trying to win control of the frozen dairy market in Easteros, and will stop at nothing to achieve their goal!

The saga has become known as the “Games Of Cones”.

*Taking Stock*

Both Lark Ices and Lannister Dairy need to do a stock take, but the software they both use is corrupt.

In order to log the data into each company’s spreadsheet you are going to have to round to different amounts.

Can you do the rounding for them?

|  |  |  |
| --- | --- | --- |
| *Lark Ices* |  | *Stannister Dairy* |
| *Ice Lolly* | *Amount* | *Round To* | *Rounded* |  | *Ice Lolly* | *Amount* | *Round To* | *Rounded* |
| Kallippo | 1734 | Nearest 10 | **1730** |  | Kallippo | 1672 | Nearest hundred | **1700** |
| Kornitto | 1356 | Nearest 100 | **1400** |  | Kornitto | 2531 | Nearest thousand | **3000** |
| Banquet | 575 | Nearest 10 | **580** |  | Banquet | 839 | Nearest hundred | **800** |
| Meganum | 15672 | Nearest 10,000 | **20,000** |  | Meganum | 12347 | Nearest ten | **12350** |
| Shuttle | 12469 | Nearest 1000 | **12,000** |  | Shuttle | 5499 | Nearest thousand | **5000** |

*There’s No Place Like Cone*

Each company needs to know roughly how many ice cream cones and flakes they have.

Just an estimate will do as the office calculators have gone missing.

Estimate the number of cones each company has in stock.

|  |  |  |
| --- | --- | --- |
| *Lark Ices* |  | *Stannister Dairy* |
| *Cones* | They have 38 boxes and each box contains 124 cones.**40 × 120 = 4800** |  | *Cones* | They have 53 boxes containing 18 packets of 8 cones each.**50 × 20 × 10= 10,000** |
| *Flakes* | 213 boxes each containing 54 bars.**200 × 50 = 10,000** |  | *Flakes* | 102 boxes each containing 42 multipacks. Each multipack contains 12 bars.**100 × 40 × 10 = 40,000** |

*Takings Into Account*

Each company asks the van drivers to phone in their takings, but a rounded amount. From that information they calculate the maximum and minimum amount to takings for a day.

Can you work out the maximum and minimum amounts for each van’s takings?

|  |  |  |
| --- | --- | --- |
| *Lark Ices – rounded to the nearest £10* |  | *Stannister Dairy – rounded to the nearest £1* |
| *Van* | *Rounded* | *Minimum* | *Maximum* |  | *Van* | *Rounded* | *Minimum* | *Maximum* |
| A | £120 | **£115** | **£124.99** |  | A | £152 | **£151.50** | **£152.49** |
| B | £210 | **£205** | **£214.99** |  | B | £147 | **£146.50** | **£147.49** |
| C | £80 | **£75** | **£84.99** |  | C | £95 | **£94.50** | **£95.49** |
| D | £100 | **£95** | **£104.99** |  | D | £100 | **£99.50** | **£100.49** |
| E | £160 | **£155** | **£164.99** |  | E | £124 | **£123.50** | **£124.49** |
| F | £90 | **£85** | **£94.99** |  | F | £125 | **£124.50** | **£125.49** |
| G | £200 | **£195** | **£204.99** |  | G | £76 | **£75.50** | **£76.49** |
| H | £140 | **£135** | **£144.99** |  | H | £151 | **£150.50** | **£151.49** |

*Running Up That Chill*

The companies must make sure that they don’t run out of fuel for the vans, fuel that keeps the freezers working and therefore the ice lollies and ice creams iced!

Can you help with the calculations?

|  |  |  |
| --- | --- | --- |
| *Lark Ices* |  | *Stannister Dairy* |
| The Lark Ices vans can chill their products for 30 minutes (to the nearest 10 minutes) with a litre of diesel.What is the maximum and minimum time that a Lark Ices van could chill their products with 50 litres (to the nearest 10 litres) of diesel?**Maximum: 1925 mins****Minimum: 1125 mins** |  | The Stannister Dairy vans can chill their products for 2 hours (to the nearest hour) with a litre of diesel.A Stannister Dairy van managed to chill their products for a total of 60 hours (to the nearest hour). What is the maximum and minimum number of litres of diesel in the van?**Maximum: 40.3 litres****Minimum: 23.8 litres** |