

Games of Cones - Season 1 - Fractions - 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 and Stannister Dairy

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!

Pitch Battles!

Each company sends vans to the four main beaches in Easteros. The company with the most vans at each beach is considered the “owner” of that beach.

Can you calculate how many vans each company has at each beach and therefore who owns them?

<i>Lark Ices - 32 vans</i>		
<i>Beach</i>	<i>Fraction</i>	<i>Amount</i>
Walled	$\frac{1}{4}$	8
Valerie	$\frac{3}{8}$	12
Iron	$\frac{5}{16}$	10
Daroky	$\frac{1}{16}$	2

<i>Stannister Dairy - 36 vans</i>		
<i>Beach</i>	<i>Fraction</i>	<i>Amount</i>
Walled	$\frac{1}{6}$	6
Valerie	$\frac{5}{18}$	10
Iron	$\frac{1}{3}$	12
Daroky	$\frac{2}{9}$	8

The Great Wessos Flake Off!

Profits are maximised when customers get a flake with their “99”, in fact, both companies measure their success on the number of flakes they sell on a daily basis.

Can you calculate which company had the better of each day of one week?

<i>Lark Ices</i>			
<i>Day</i>	<i>Custom</i>	<i>Flake</i>	<i>Number</i>
Monday	120	$\frac{1}{2}$	60
Tuesday	200	$\frac{3}{4}$	150
Wednesday	80	$\frac{3}{8}$	30
Thursday	240	$\frac{5}{6}$	200
Friday	300	$\frac{7}{15}$	140
Saturday	480	$\frac{11}{12}$	440
Sunday	640	$\frac{7}{8}$	560

<i>Stannister Dairy</i>			
<i>Day</i>	<i>Custom</i>	<i>Flake</i>	<i>Number</i>
Monday	150	$\frac{1}{3}$	50
Tuesday	180	$\frac{2}{3}$	120
Wednesday	70	$\frac{4}{7}$	40
Thursday	280	$\frac{5}{7}$	200
Friday	320	$\frac{5}{8}$	200
Saturday	510	$\frac{11}{17}$	330
Sunday	720	$\frac{13}{18}$	520

Ice To See You, To See You...

Both companies carried out a survey of the people of Easteros. They asked just one question:
 "Have you visited a Lark Ices/Stannister Dairy van in the last year?"

From the responses they made the following claims...

<i>Lark Ices</i>	<i>Stannister Dairy</i>
$\frac{7}{8}$ of the population of Easteros prefer Lark Ices.	Stannister Dairy is used by $\frac{31}{36}$ of the people of Easteros - a clear favourite!

Which company claims that more people like them? **Lark Ices**

Wages - An Ice Cream War

Both companies want to attract the best ice cream sellers in the city of Easteros. In order to do this they must offer the best payment package they can. Can you calculate what fraction of their wages an employee would have after deductions for each company?

<i>Lark Ices</i>		<i>Stannister Dairy</i>	
<i>Deduction</i>	<i>Fraction</i>	<i>Deduction</i>	<i>Fraction</i>
<i>Tax</i>	$\frac{1}{5}$	<i>Tax</i>	$\frac{1}{5}$
<i>Pension</i>	$\frac{1}{12}$	<i>Pension</i>	$\frac{1}{8}$
<i>Van Maintenance</i>	$\frac{7}{60}$	<i>Van Maintenance</i>	$\frac{3}{40}$
<i>Uniform Hire</i>	$\frac{1}{15}$	<i>Uniform Hire</i>	$\frac{1}{20}$
<i>Take Home</i>	$\frac{8}{15}$	<i>Take Home</i>	$\frac{11}{20}$

Which company offers their employees the better deal? **Stannister Dairy**

Holiday On Ice!

As well as ice cream, the companies sell ice lollies. They like to know what fraction of each lolly they sell. Can you find the missing fractional amounts?

<i>Lark Ices</i>		<i>Stannister Dairy</i>	
<i>Ice Lolly</i>	<i>Fraction Sold</i>	<i>Ice Lolly</i>	<i>Fraction Sold</i>
<i>Kallippo</i>	$\frac{1}{8}$	<i>Kallippo</i>	$\frac{11}{60}$
<i>Kornitto</i>	$\frac{3}{16}$	<i>Kornitto</i>	$\frac{11}{60}$
<i>Banquet</i>	$\frac{7}{32}$	<i>Banquet</i>	$\frac{1}{4}$
<i>Meganum</i>	$\frac{1}{4}$	<i>Meganum</i>	$\frac{11}{60}$
<i>Shuttle</i>	$\frac{7}{32}$	<i>Shuttle</i>	$\frac{1}{5}$
The same amount of Banquets and Shuttles were sold.		The same amount of Kallippos, Kornittos and Meganums were sold.	