



Lesson 1

Today you will be exploring energy bills and using fractions to help you.

In groups discuss how do you use energy? Write down your ideas

How much do you think the average household gas and electricity bill is a month?

£.....

What would be the yearly bill be?

1 year

£.....

Do you have a smart meter at home? What fraction of the class has smart meters?

Kyle and Daisy both have a smart meter. Last year, Kyle was paying £720 per year but since having a smart meter, his annual bill has decreased by $\frac{1}{8}$. Last year, Daisy was paying £680 per year but since having a smart meter, her annual bill has decreased by $\frac{1}{10}$.

£720							
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

£680									
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$

Who is now paying the least for their energy use?

Dave was paying £950 but his bill has reduced by $\frac{1}{5}$.
Amelia was paying £820 but her bill has reduced by $\frac{1}{10}$.
Who is now paying the least for their energy?

Andy was paying £490 but his bill has decreased by $\frac{2}{7}$.
Scarlett was paying £640 but her bill has decreased by $\frac{3}{8}$.
Who is now paying the least for their energy?

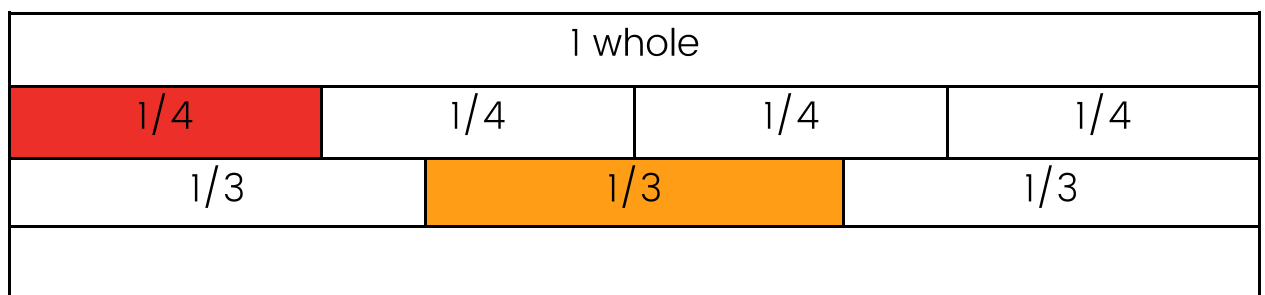
Felix was paying £1100 but his bill has decreased by $\frac{3}{11}$.
Beth was paying £810 but her bill has decreased by $\frac{2}{9}$.
Rita was paying £900 but her bill has decreased by $\frac{2}{15}$
Who is now paying the least for their energy?

An energy company are reviewing their annual customer survey. According to their database, on average customers have saved $\frac{1}{4}$ on their gas bill and $\frac{1}{3}$ on their electricity bill by switching to a smart meter. What fraction of their total energy bill have they saved?

$$\frac{1}{4} + \frac{1}{3}$$

These fractions have different denominators so cannot be added together. We must find a common denominator first. Check understanding of common denominator.

We therefore need to find a common denominator.



How much does the energy companies save their customers?

Gas Company A are making changes to their prices. To match Energy Company B, they have decided to reduce their gas tariffs by $\frac{2}{9}$ and reduce their electricity tariffs by $\frac{1}{5}$. What is the total fraction that Gas Company A are reducing their tariffs by?

Electricity Company B are analysing their accounts. On average last year, their customers saved $\frac{11}{20}$ on their energy bills. Which combinations of fractions add together to make $\frac{11}{20}$?

Extra Questions?

Ask an adult how much was the energy bill last month?

Work out what your yearly bill would be?

Work out the cost and fraction of your yearly energy bill for the months of January, February, March, June and September?