## MONEY - DAY 3

L.O: I am able to round to the nearest pound and to estimate sums of money

## Success Criteria

$\checkmark$ I can use pictorial representations, like number lines, and mental strategies to round to the nearest pound and estimate sums of money.
$\checkmark$ I can explain my reasoning when using pictorial representations, like number lines, and mental strategies to round to the nearest pound and estimate sums of money.

## Starter

Thinking about rounding to the nearest pound, which one doesn't belong?


Explain your answer.

## Answer...

Thinking about rounding to the nearest pound, which one doesn't belong?

$£ 1.23$ doesn’t belong as it rounds down to $£ 1$ to the nearest pound, whereas $£ 1.51, £ 1.75$ and $£ 1.97$ round up to $£ 2$ to the nearest pound.

## Place $£ 1.05$ on the number line below.



Does it round up or down to the nearest pound?


It rounds down to $£ 1$ !

## Place $£ 2.55$ on the number line below.



Does it round up or down to the nearest pound?


It rounds up to $£ 3$ !

## Estimate the value of the amount the arrow is indicating



Does it round up or down to the nearest pound?


It rounds down to $£ 11$ !

## Estimate the value of the amounts the arrows are indicating.



Which amounts round up to $£ 15$ ? Which amounts round down to £14?
Explain your answer

## Answer...


$£ 14.15$ and $£ 14.49$ round down to $£ 14$ as they are amounts of £14.49 or less.
$£ 14.67$ and $£ 14.91$ round up to $£ 15$ as they amounts of $£ 14.50$ or greater.

How can I figure out roughly how much the three prices total?

$$
£ 2.01+£ 0.99+£ 1.99
$$

Would I be able to pay with a $£ 5$ note?

## Answer...

$£ 2.01+£ 0.99+£ 1.99$ $£ 2+£ 1+£ 2=£ 5$

Would I be able to pay with a $£ 5$ note?

Yes, I could pay with a $£ 5$ note.

## How can I figure out roughly how much the three prices total?

## $£ 4.11+£ 2.97+£ 5.95$

Would I be able to pay with a $£ 10$ note?

## Answer...

$$
\begin{gathered}
£ 4.11+£ 2.97+£ 5.95 \\
£ 4+£ 3+£ 6=£ 13
\end{gathered}
$$

Would I be able to pay with a $£ 10$ note?
No, $£ 13$ is more than $£ 10$ !

## Activity

## A burger costs $£ 4.75$ and portions of French fries cost $£ 1.45$.

## James has the amount of money shown below.



Using rounding and estimation, does James have enough money to buy three burgers and four portions of French fries?
Explain your answer.

## Answer...



James has £18.20.
A burger costs approximately $£ 5$ and French fries cost $£ 1$ to the nearest pound.

So, three burgers cost approximately $£ 15$ and four portions of French fries cost £4, so James does not have enough money as it will cost more than $£ 19$.

## Activity

Ruth and Jamal have been working in a shop.

Ruth says, "I have sold a basketball for $£ 5.75$, a pair of socks for $£ 3.99$ and a pair of shorts for $£ 12.59$ today."
Jamal says, "Today, I have sold a frisbee for $£ 4.89$, a T-shirt for $£ 8.50$ and a pair of running shoes for $£ 13.99$."

Using rounding and estimation, who has made more money in sales today? Explain your answer.

## Answer...

Ruth and Jamal have been working in a shop.

Ruth says, "I have sold a basketball for $£ 5.75$, a pair of socks for $£ 3.99$ and a pair of shorts for $£ 12.59$ today."

Jamal says, "Today, I have sold a frisbee for $£ 4.89$, a T-shirt for $£ 8.50$ and a pair of running shoes for $£ 13.99$."

Using rounding and estimation, who has made more money in sales today?
Explain your answer.

Jamal has made more money in sales today. Ruth sold $£ 6+£ 4$
$+£ 13$, which is a total of $£ 23$, whereas Jamal made sales of $£ 5$
$+£ 9+£ 14=£ 28$.

## Activity

Chen is thinking of an amount of money.
He says, "My total rounds to $£ 24$ to the nearest pound. In the pence, there is an odd digit in the tens place and an even digit in the ones place. In the pounds, there is an even digit in the tens place and an odd digit in the ones place."

James says, "Chen’s number might be £24.16."

Do you agree?
Explain your answer by providing an explanation, including possible amounts.

## Answer...

Chen is thinking of an amount of money.
He says, "My total rounds to $£ 24$ to the nearest pound. In the pence, there is an odd digit in the tens place and an even digit in the ones place. In the pounds, there is an even digit in the tens place and an odd digit in the ones place."

James says, "Chen’s number might be £24.16."

Do you agree?
Explain your answer by providing an explanation, including possible amounts.
No, I do not agree. Chen has said the ones place in the pounds amount is odd, so Chen is thinking of an amount between $£ 23.50$ and $£ 23.99$. Examples include $£ 23.50$, $£ 23.72$ and $£ 23.98$ (odd tens digit and even ones digit in pence).

## Evaluation

Has Astrobee made an accurate estimate?
Explain your answer.

## Answer...

If I sell some honey for $£ 7.75$ and some honeycomb for $£ 3.59$, I will have made approximately $£ 10$.

## Has Astrobee made an accurate estimate? <br> Explain your answer.

Astrobee has not made an accurate estimate. A better estimate is $£ 12$ as both $£ 7.75$ and $£ 3.59$ should be rounded up to $£ 8$ and $£ 4$ respectively.

