**Objective**:

Read, write and convert between analogue and digital 12 hour and 24 -hour clocks

Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days

## Year 4 Task:

## Which key facts do you know?

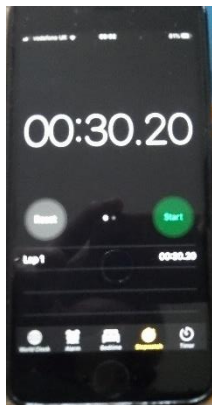| Key fact | Conversion | Hint |
|---|---|---|
| There are _ seconds in a minute. | 120 seconds = _ minutes<br><br>360 seconds = _ minutes | • *Divide by 60- how many groups of 60 in 120?*<br>• *How many 60s = 120*<br>  *60 x ? = 120* |
| There are _ minutes in an hour. | 120 minutes = _ hours<br><br>135 minutes = _ hours<br><br>70 minutes = _ hours | • *Divide by 60- how many groups of 60 in 120?*<br>• *How many 60s = 120*<br>  *60 x ? = 120*<br>• *Can record minutes as whole hours and minutes*<br>  *Eg 70 mins = 1hr and 10 mins* |
| There are _ hours in a day. | 48 hours = _ days<br><br>72 hours = _ days<br><br>12 hours = _ day | • *Divide by 24- how many groups of 24 in 48?*<br>• *How many 24s = 48*<br>  *24 x ? = 48*<br>• *24 hours +12 hours = $1\frac{1}{2}$ days* |
| There are _ days in a week. | 14 days = _ weeks<br>28 days = _ weeks<br><br>**What word is used for two weeks?** | • *Divide by 7- how many groups of 7 in 14?*<br>• *How many 7s = 14*<br>  *7 x ? = 14* |
| There are _ months in a year. | 24 months = _ years<br>36 months = _ years<br>48 months = _ years<br>120 months = _ years<br><br>**What word is used for 10 years?** | • *Divide by 12- how many groups of 12 in 24?*<br>• *How many 12s = 24*<br>  *12 x ? = 24* |

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**Task**

Use a mobile phone to time how long it takes in whole seconds and minutes for you to do an activity. You could:

- Recite your 3 times table ( or any other times table you are trying tp get better at) wthout any mistakes – go back to the beginning if you do and try again
- Do 20 star jumps- can you do more than 20 in the same time?
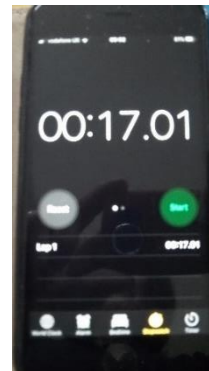- Say the alphabet backwards without any mistakes – go back to the start if you do.

Does practise help you to get faster or more accurate?

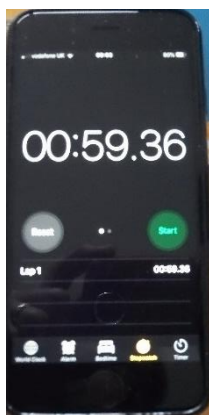Record your times as whole seconds and as minutes and whole seconds.
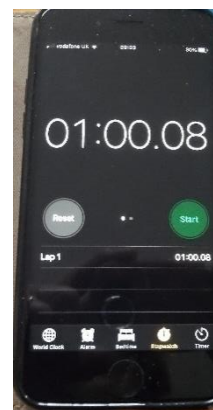
**Worked example**



This stop watch says

30 seconds and $\frac{2}{10}$ of a second

So record as 30 seconds



This stop watch says

17 seconds and $\frac{1}{100}$ of a second

So record as 17 seconds



This stop watch says

59 seconds and $\frac{3}{10}$ and $\frac{6}{100}$ of a second

So record as 59 seconds



This stop watch says

1 minute (no whole seconds) and $\frac{8}{100}$ of a second

So record as 1 minute

**HIAS HOME LEARNING**

**Task**

Molly and Dan make some cakes. For each batch of cakes it takes 20 minutes to make the cakes and 40 minutes for each batch of cakes to cook in the oven. They want to make several batches of cakes to sell at a fair.
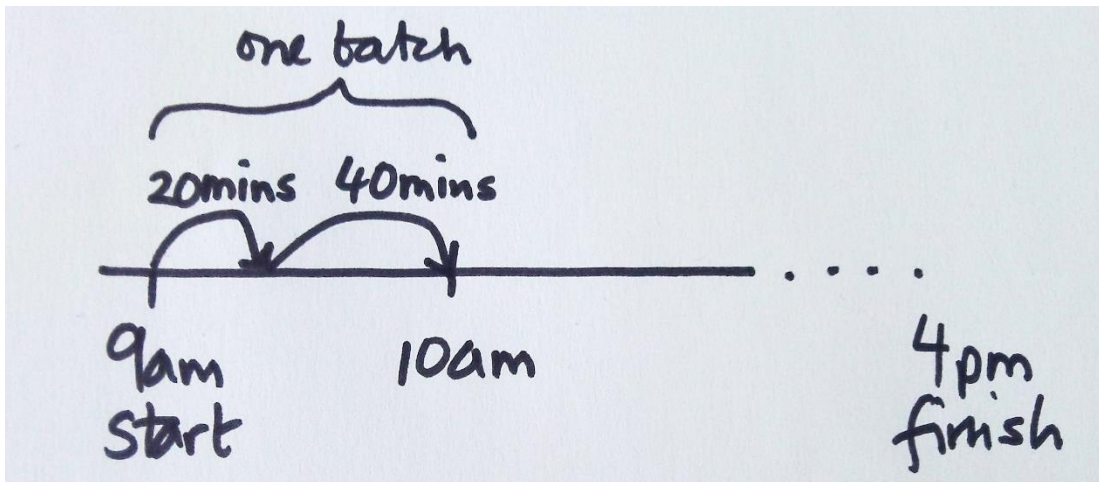
If they are ready to start at 9.00am and can keep making cakes until 4pm on the same day, how many batches of cakes can they make?

**Hint:**

**How much time have they got to make cakes if they start at 9am and finish by 4pm?**

**How long does it take to make and bake each batch of cakes?**

**A number line might be a good way of recording your thinking...**



**Can you write all the times on your number line in both 24 hour time and using AM/PM?**

**For example:**

**11.15 am = 11:15; 1pm = 13:00; 2.30pm= 14:30**

There are 10 small cakes in each batch and each batch of cakes costs £1.50 to make.

How much should Molly and Dan charge per cake to make a profit?

Answer: 7 batches of cakes (if they don't stop for lunch)

The total cost to make 10 cakes is £1.50 so they need to charge at least 16p per cake to make a profit

**HIAS HOME LEARNING**

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