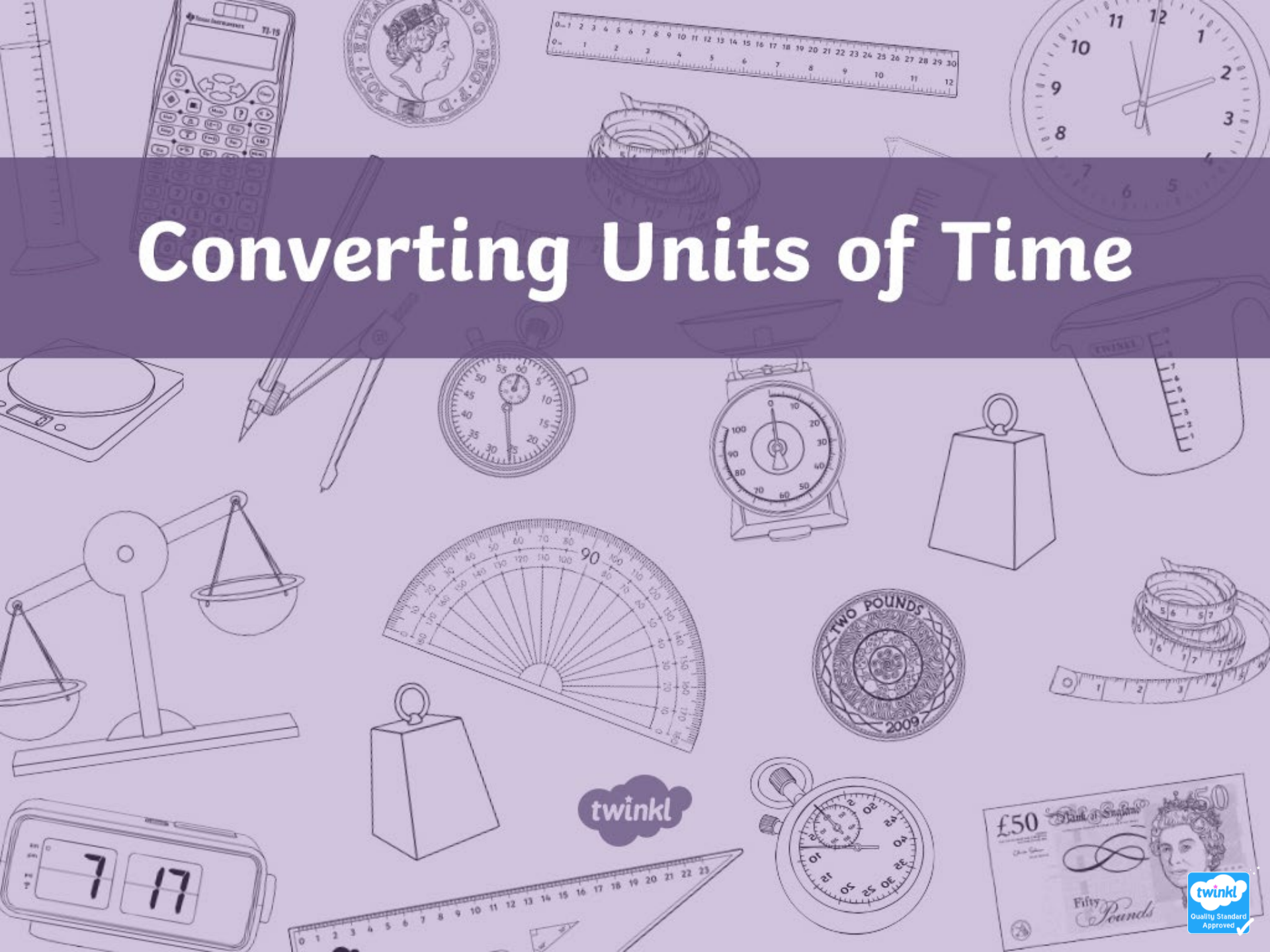


Converting Units of Time



twinkl

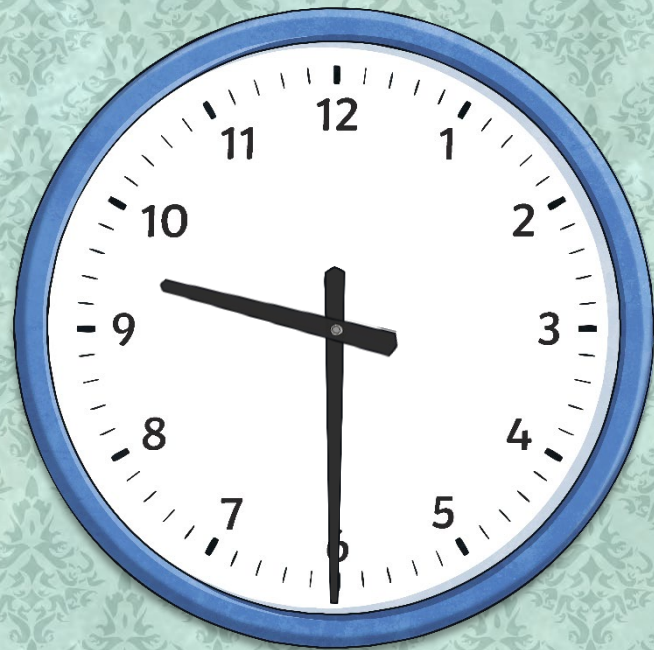
How Many Minutes?



Calculate how many minutes between the time on the first clock and the time on the second clock.



5 past 9

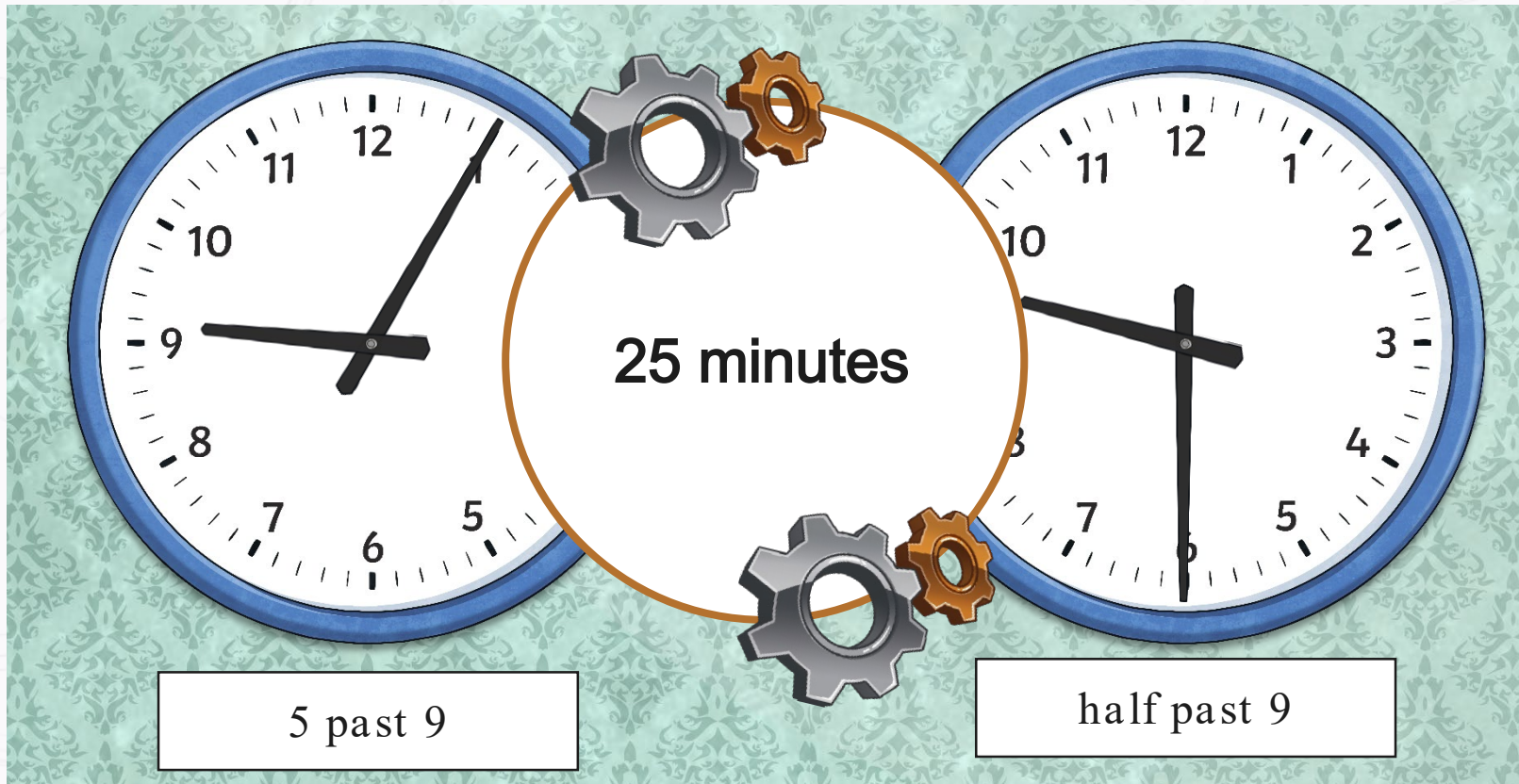


half past 9

How Many Minutes?



Calculate how many minutes between the time on the first clock and the time on the second clock.



How Many Minutes?



Calculate how many minutes between the time on the first clock and the time on the second clock.



20 past 7

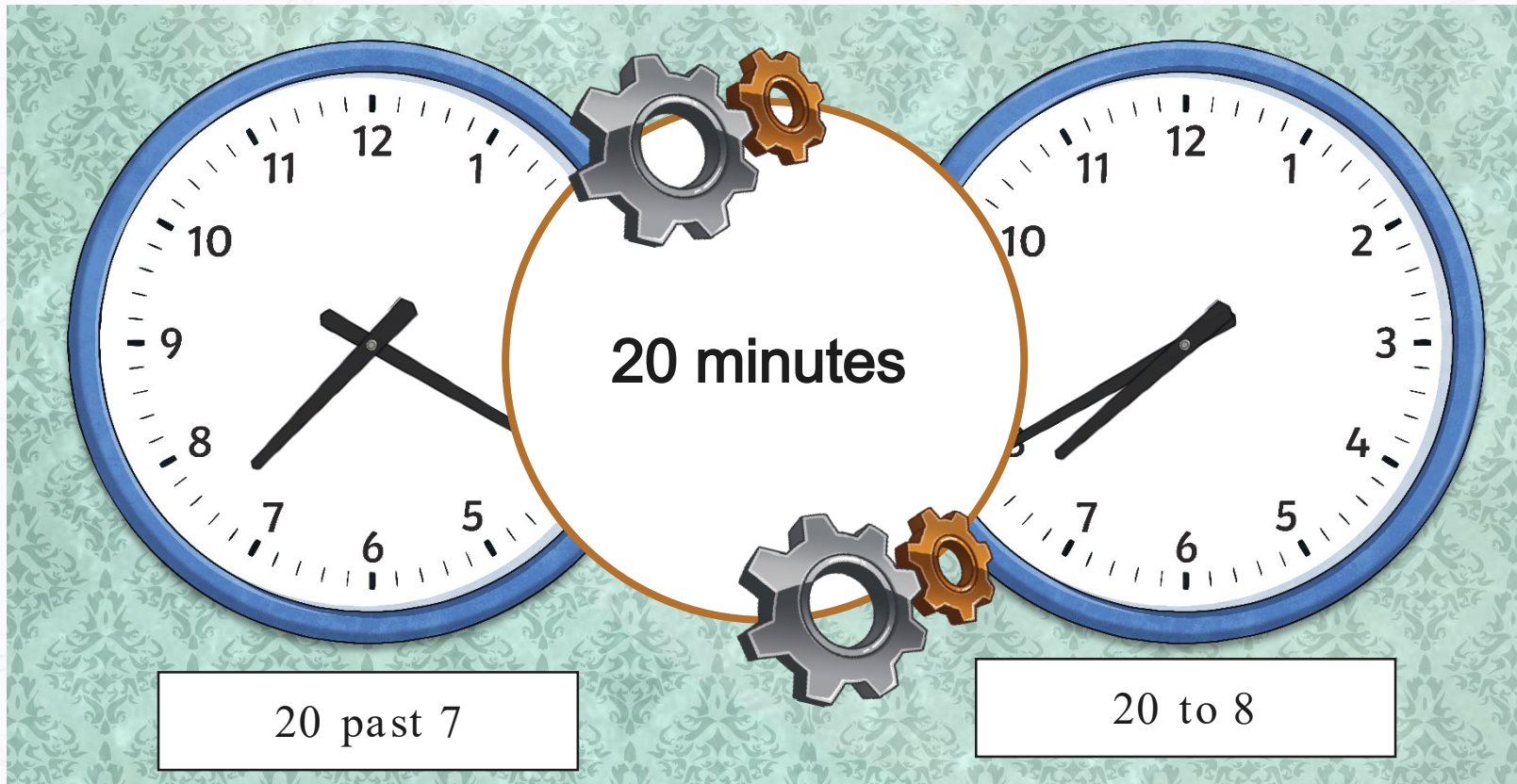


20 to 8

How Many Minutes?



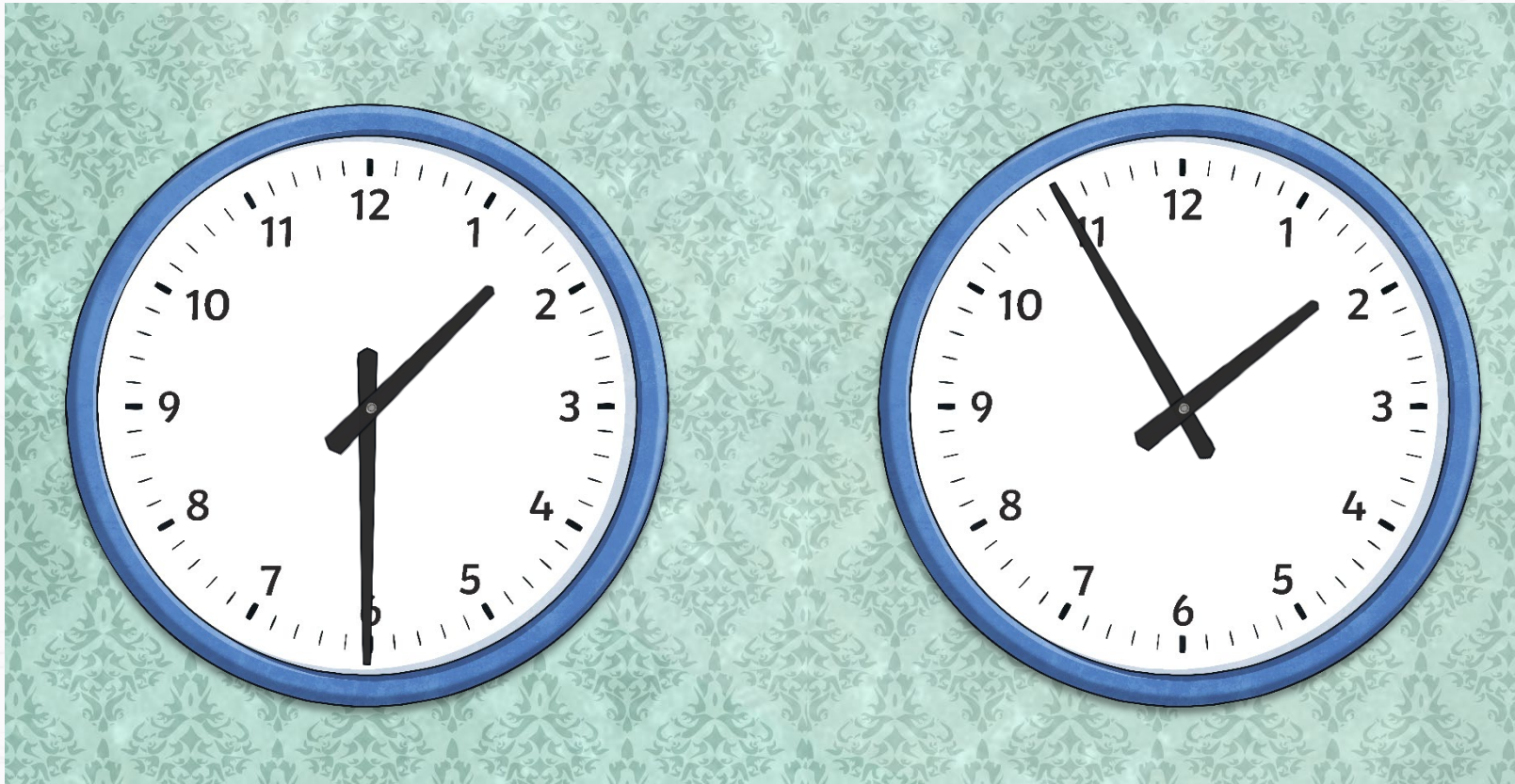
Calculate how many minutes between the time on the first clock and the time on the second clock.



How Many Minutes?



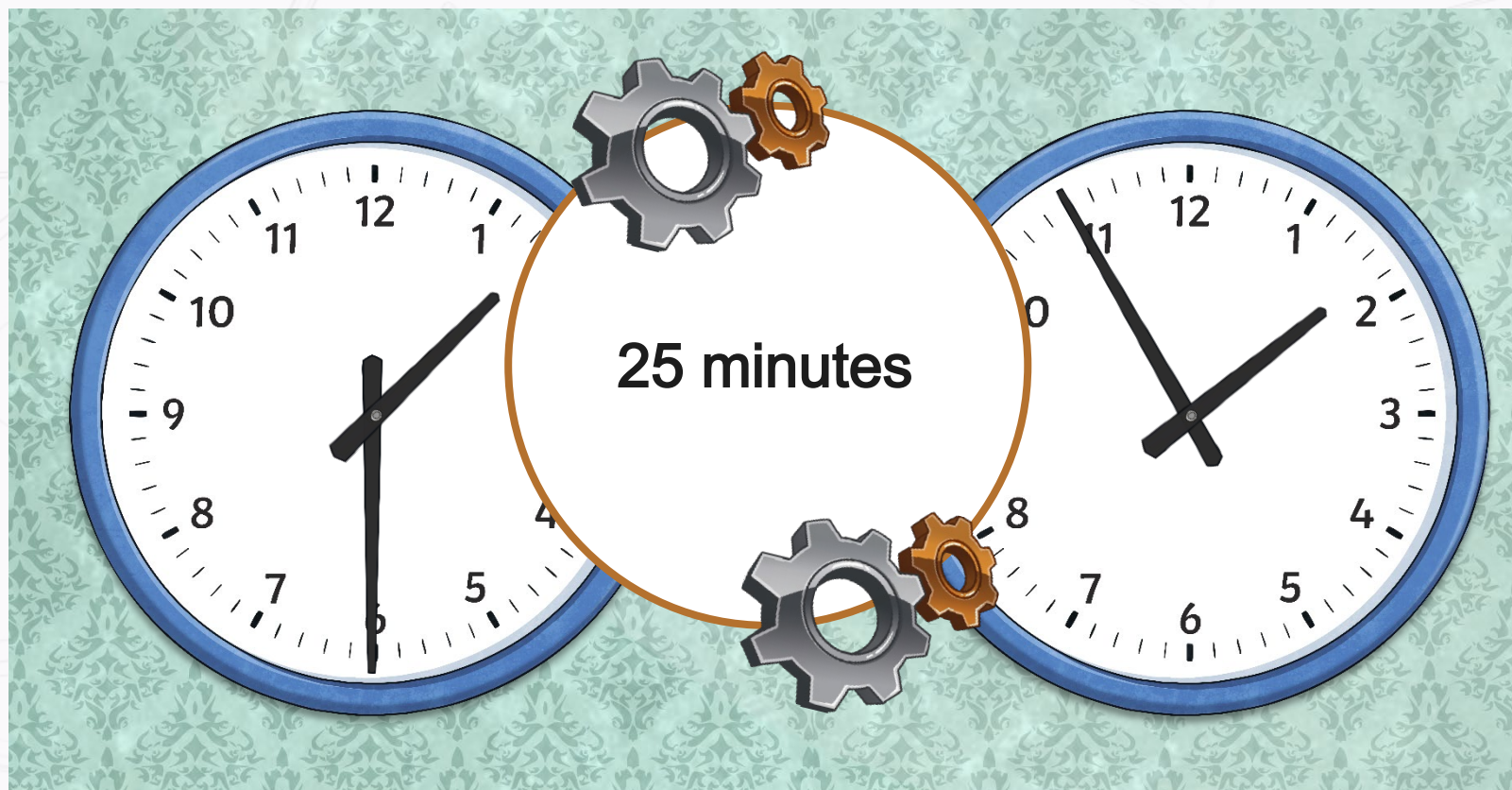
Calculate how many minutes between the time on the first clock and the time on the second clock.



How Many Minutes?



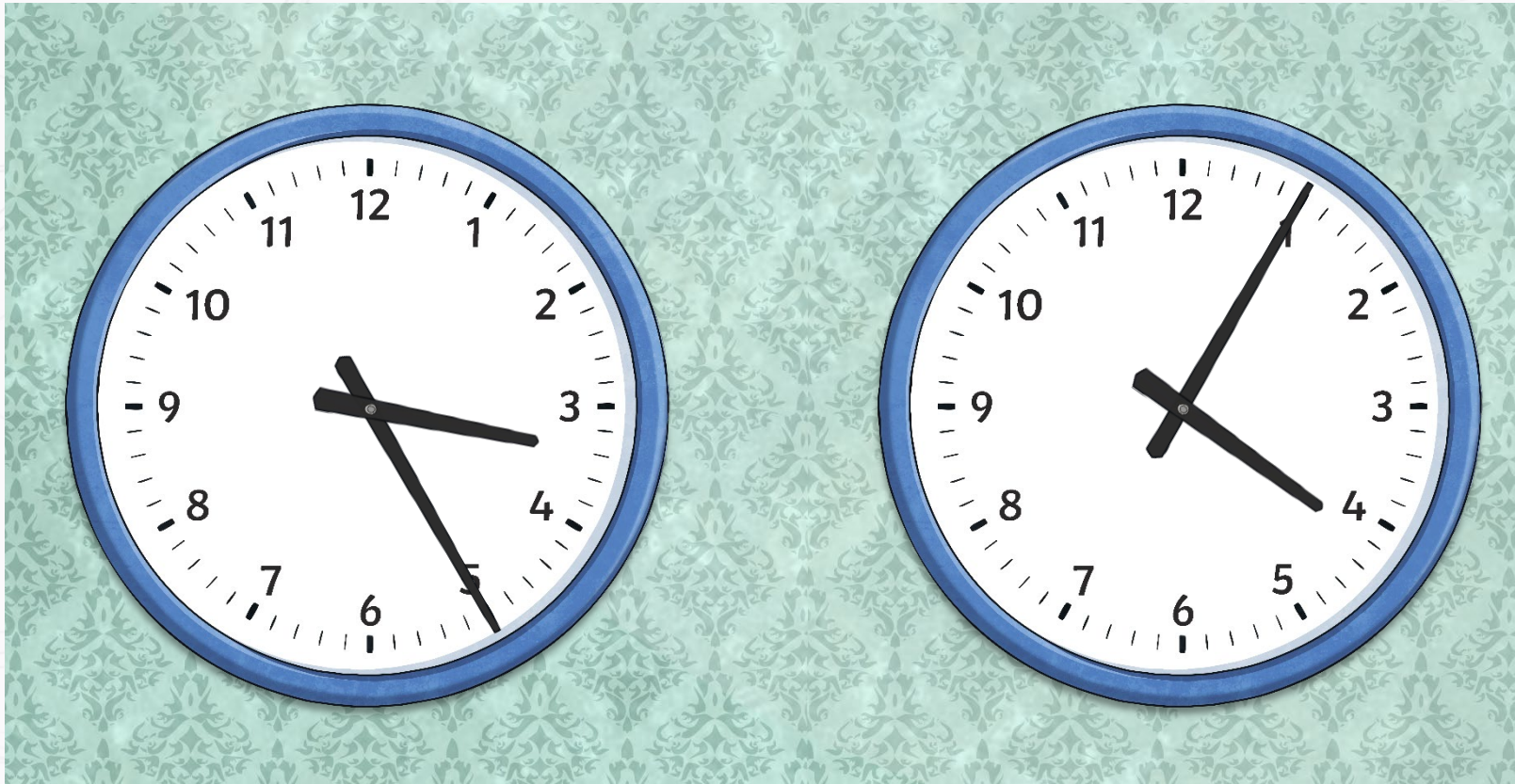
Calculate how many minutes between the time on the first clock and the time on the second clock.



How Many Minutes?



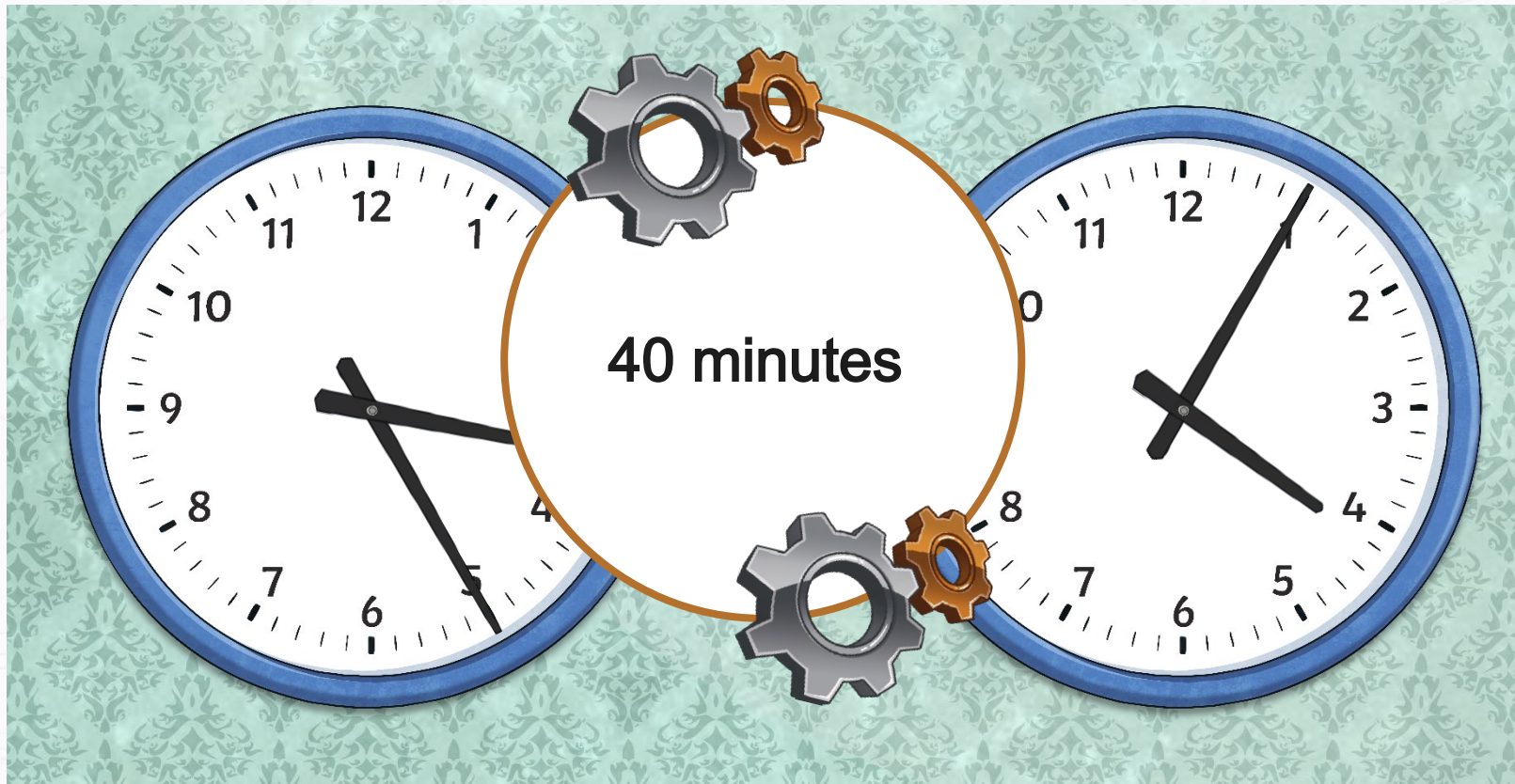
Calculate how many minutes between the time on the first clock and the time on the second clock.



How Many Minutes?



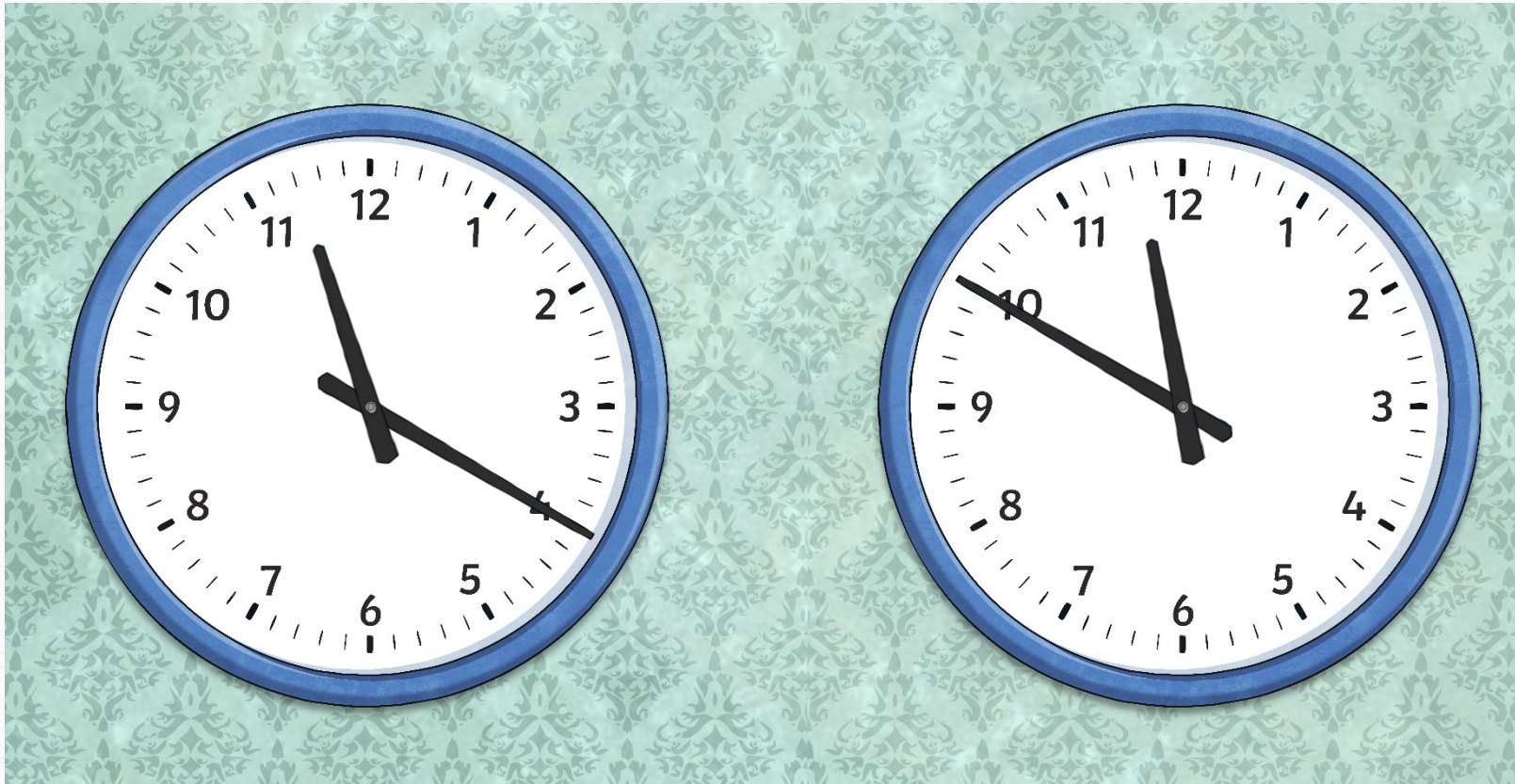
Calculate how many minutes between the time on the first clock and the time on the second clock.



How Many Minutes?



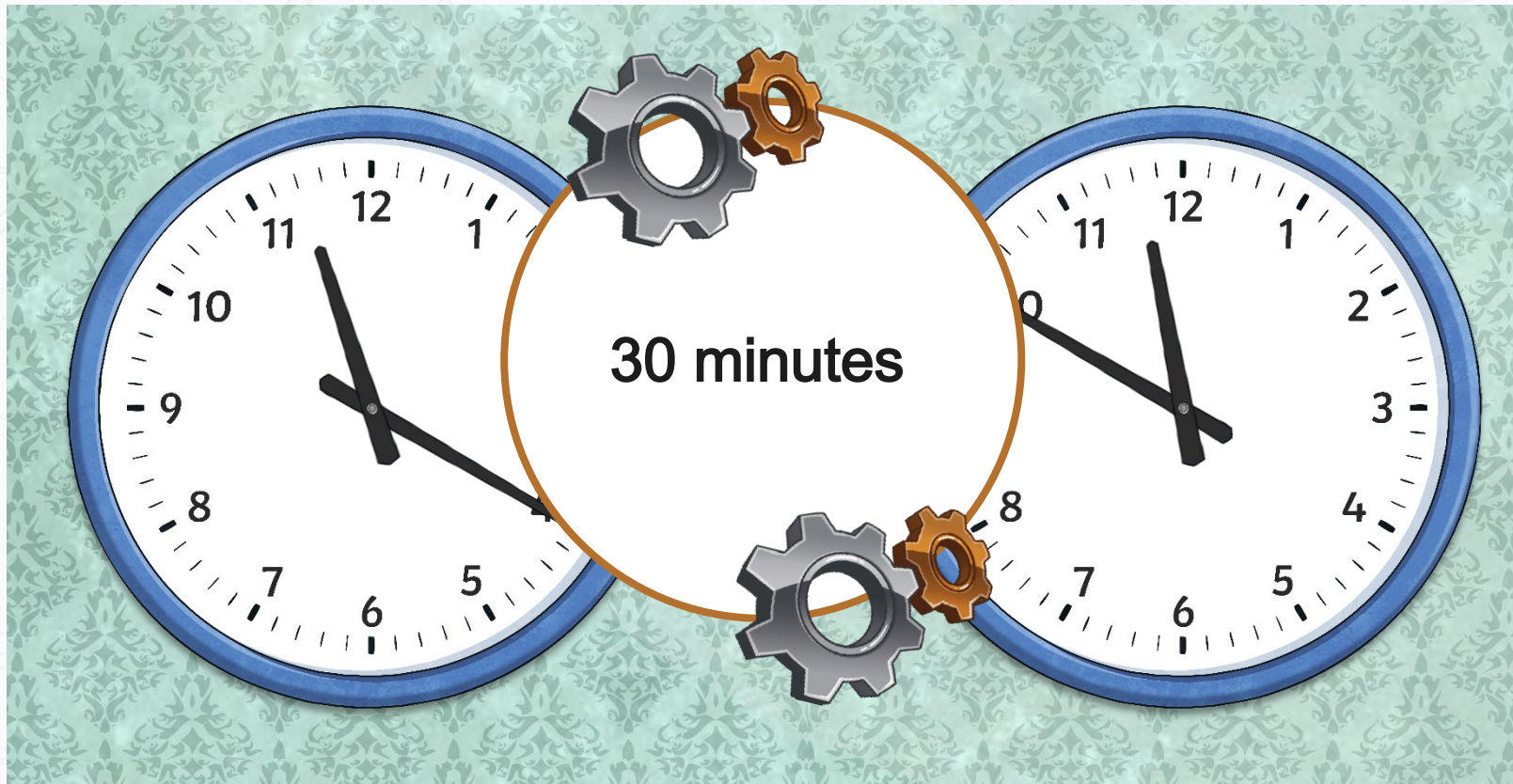
Calculate how many minutes between the time on the first clock and the time on the second clock.



How Many Minutes?



Calculate how many minutes between the time on the first clock and the time on the second clock.

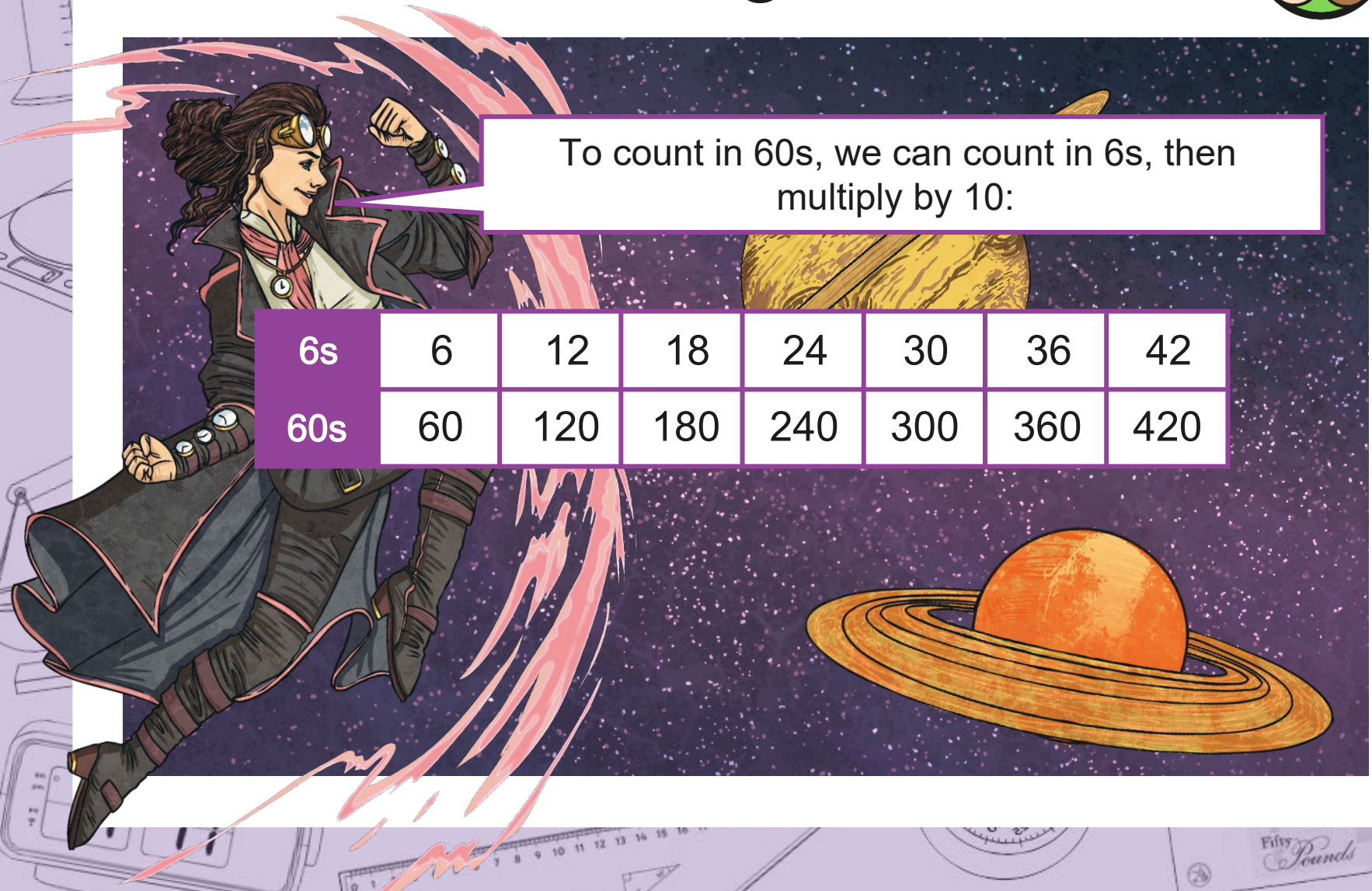


Counting in 60s



To count in 60s, we can count in 6s, then multiply by 10:

6s	6	12	18	24	30	36	42
60s	60	120	180	240	300	360	420



Counting in 60s

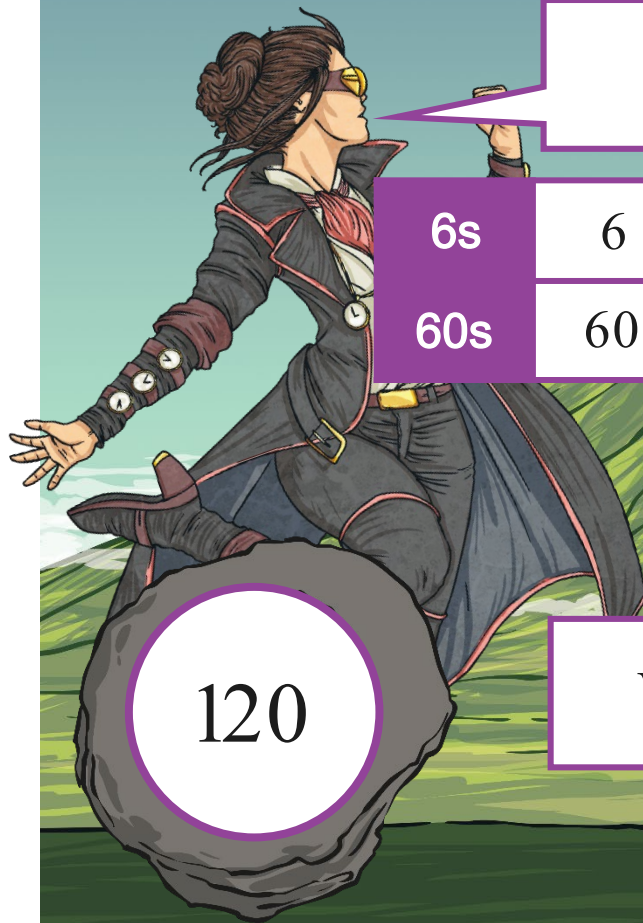


To count in 60s, we can count in 6s, then multiply by 10:

6s	6	12	18	24	30	36	42
60s	60	120	180	240	300	360	420

120

What is 2×60 ?



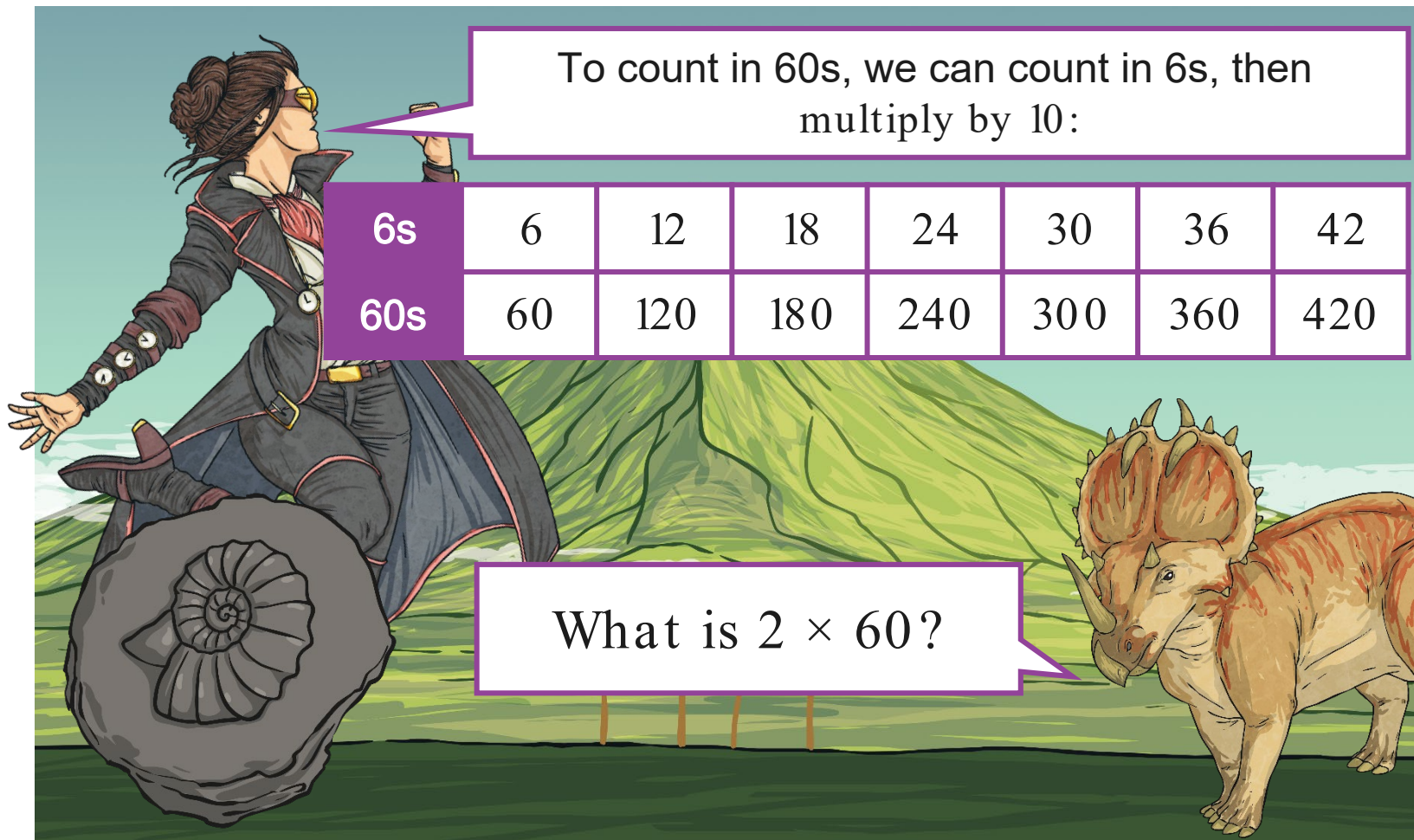
Counting in 60s



To count in 60s, we can count in 6s, then multiply by 10:

6s	6	12	18	24	30	36	42
60s	60	120	180	240	300	360	420

What is 2×60 ?



Counting in 60s



To count in 60s, we can count in 6s, then multiply by 10:

6s	6	12	18	24	30	36	42
60s	60	120	180	240	300	360	420

What is 5×60 ?

Counting in 60s



To count in 60s, we can count in 6s, then multiply by 10:

6s	6	12	18	24	30	36	42
60s	60	120	180	240	300	360	420

300

What is 5×60 ?

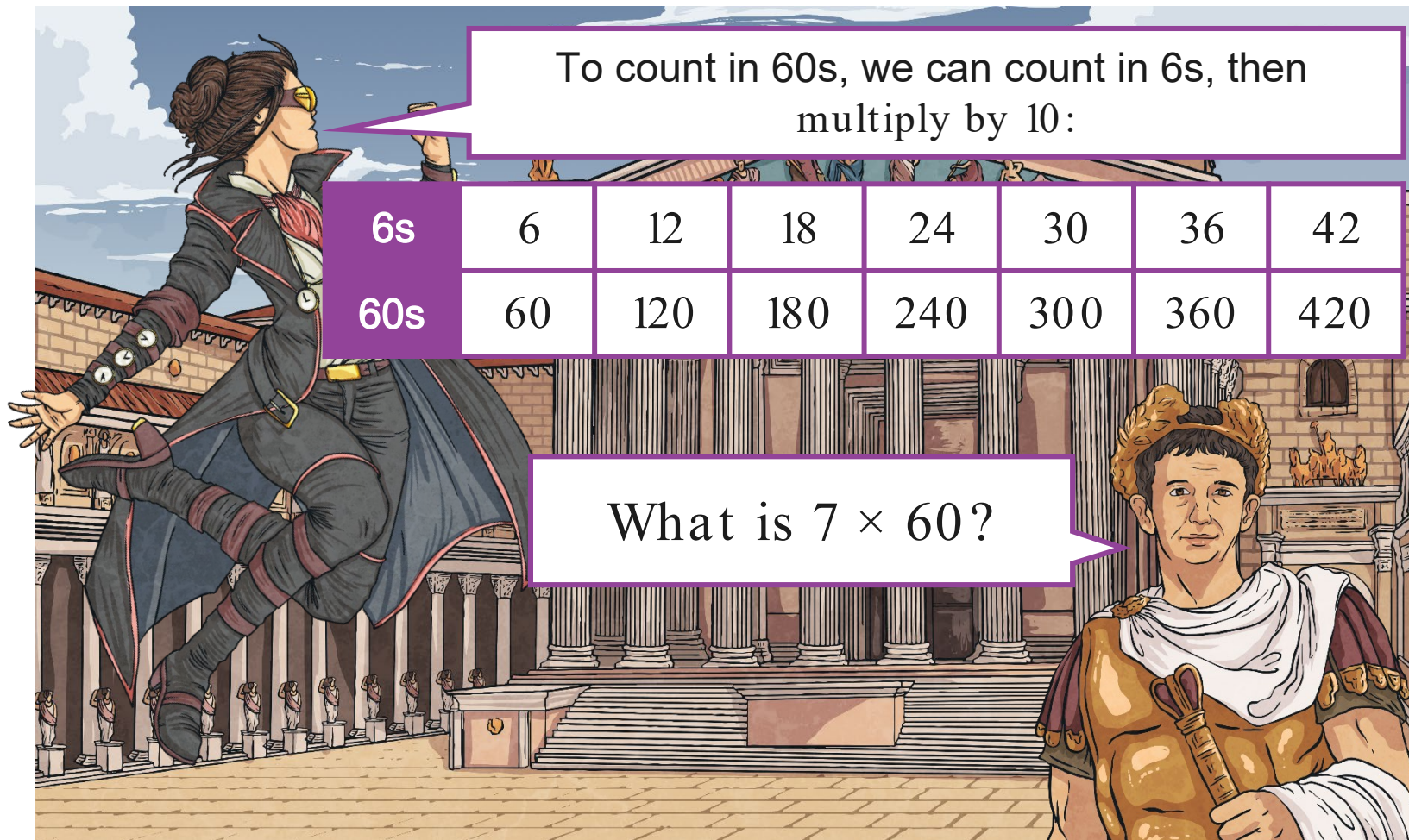
Counting in 60s



To count in 60s, we can count in 6s, then multiply by 10:

6s	6	12	18	24	30	36	42
60s	60	120	180	240	300	360	420

What is 7×60 ?



Counting in 60s



To count in 60s, we can count in 6s, then multiply by 10:

6s	6	12	18	24	30	36	42
60s	60	120	180	240	300	360	420

What is 7×60 ?

420

Counting in 60s



To count in 60s, we can count in 6s, then multiply by 10:

What is 6×60 ?



Counting in 60s



To count in 60s, we can count in 6s, then multiply by 10:

What is 6×60 ?

An illustration of a Victorian street scene. On the left, a man in a dark coat and top hat is running. In the foreground, a woman in a white dress and apron stands next to a man in a white shirt and suspenders. A large gold coin with the number 360 is in the bottom left corner. The background shows a street with buildings and a clock.

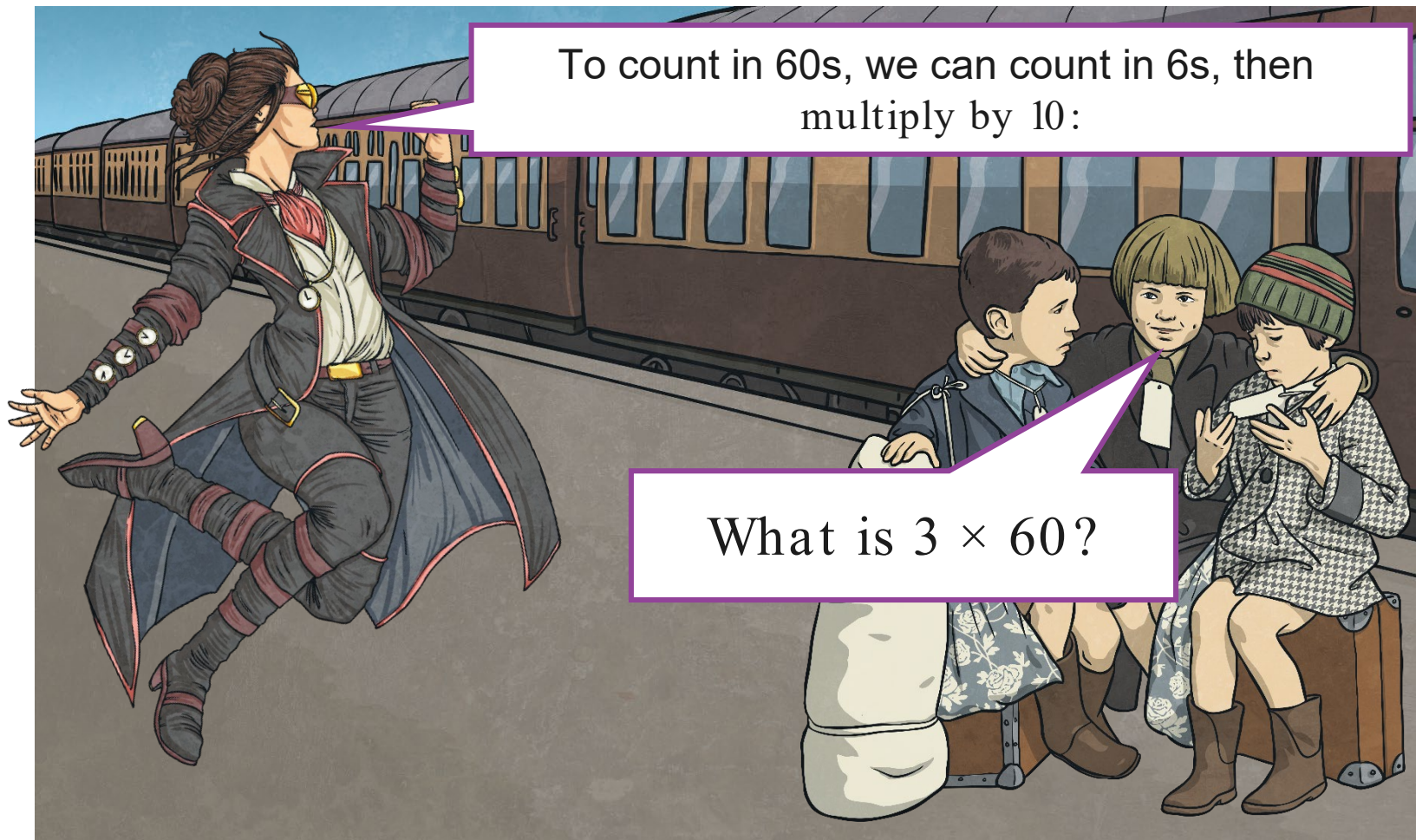
360

Counting in 60s



To count in 60s, we can count in 6s, then multiply by 10:

What is 3×60 ?



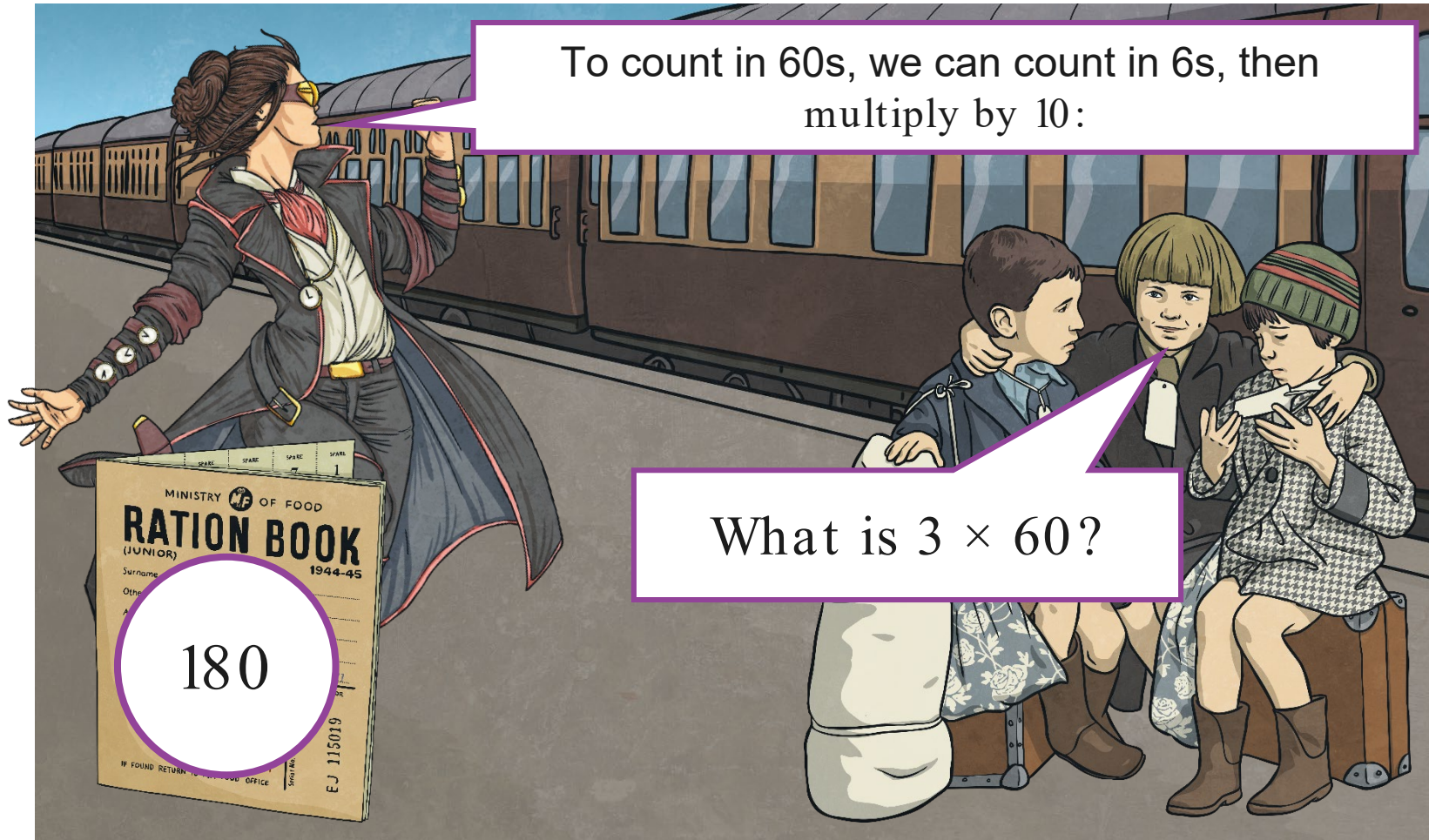
Counting in 60s



To count in 60s, we can count in 6s, then multiply by 10:

What is 3×60 ?

180



Time Units



?

How many seconds are there in a minute?

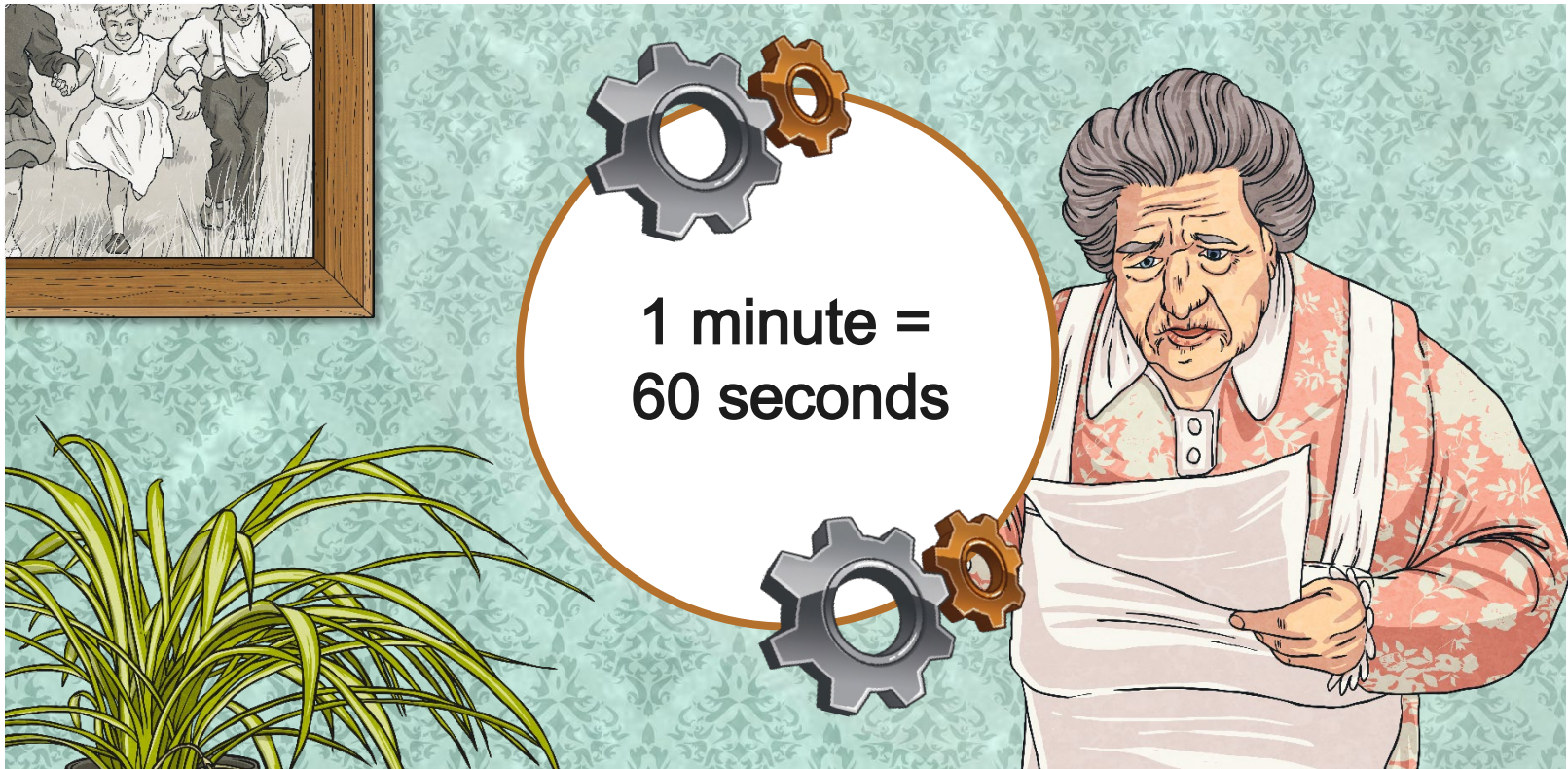


Time Units



?

How many seconds are there in a minute?



Time Units



?

How many minutes are there in an hour?

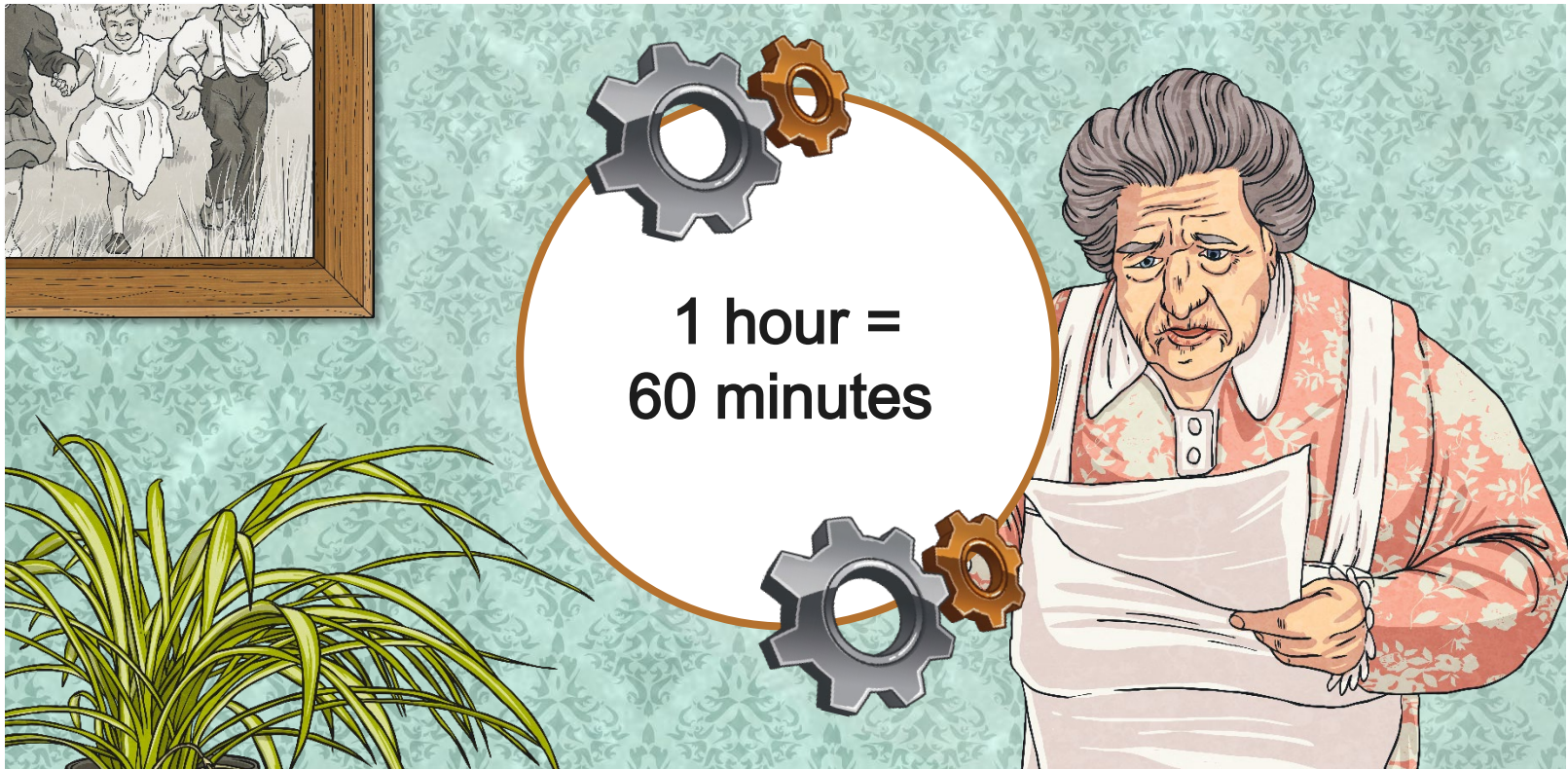


Time Units



?

How many minutes are there in an hour?



Time Units



?

How could we work out how many seconds there are in 2 minutes?

60 seconds = 1 minute

60 minutes = 1 hour

We need to count 2 lots of 60, or multiply 2 (the number of minutes) by 60.

$$2 \times 60 = 120$$

There are 120 seconds in 2 minutes.

Time Units



How many seconds are there in 5 minutes?

60 seconds = 1 minute

60 minutes = 1 hour

Time Units



How many seconds are there in 5 minutes?

60 seconds = 1 minute

60 minutes = 1 hour

$$5 \times 60 = 300$$

There are 300 seconds in 5 minutes.

Time Units



?

How many minutes are there in 2 hours?

60 seconds = 1 minute

60 minutes = 1 hour

Time Units



?

How many minutes are there in 2 hours?

60 seconds = 1 minute

60 minutes = 1 hour

$$2 \times 60 = 120$$

There are 120 minutes in 2 hours.

Time Units



?

How many minutes are there in 4 hours?

60 seconds = 1 minute

60 minutes = 1 hour

Time Units



?

How many minutes are there in 4 hours?

60 seconds = 1 minute

60 minutes = 1 hour

$$4 \times 60 = 240$$

There are 240 minutes in 4 hours.

Time Units



We know that to convert from minutes to seconds or hours to minutes, we need to multiply by 60. What do we need to do to answer this question?

?

How many minutes is 120 seconds?

60 seconds = 1 minute

60 minutes = 1 hour

Converting from minutes to seconds is the opposite of converting from seconds to minutes, so we can use the inverse and divide by 60.

$120 \div 60$ is the same as $12 \div 6$.

$$120 \div 60 = 2$$

Time Units



?

How many minutes is 360 seconds?

60 seconds = 1 minute

60 minutes = 1 hour

Time Units



?

How many minutes is 360 seconds?

60 seconds = 1 minute

60 minutes = 1 hour

$$360 \div 60 = 6$$

360 seconds is 6 minutes.

Time Units



?

How many hours is 180 minutes?

60 seconds = 1 minute

60 minutes = 1 hour

Time Units



?

How many hours is 180 minutes?

60 seconds = 1 minute

60 minutes = 1 hour

$$180 \div 6 = 3$$

180 minutes is 3 hours.

Time Units



?

How many hours is 300 minutes?

60 seconds = 1 minute

60 minutes = 1 hour

Time Units



?

How many hours is 300 minutes?

60 seconds = 1 minute

60 minutes = 1 hour

$$300 \div 60 = 5$$

300 minutes is 5 hours.

Ordering Time Units

Seconds and Minutes



Here are three time measurements:

75 seconds 1 minute 30 seconds 80 seconds



What do we need to do to be able to order these measurements?

We need to make sure that all measurements are in the same unit.
In the example, convert the middle measurement into seconds:

$1 \text{ minute } 30 \text{ seconds} = 60 \text{ seconds} + 30 \text{ seconds} = 90 \text{ seconds}$
75 seconds 90 seconds 80 seconds

The order from shortest to longest time would be:

75 seconds 80 seconds 1 minute 30 seconds



Ordering Time Units



Seconds and Minutes

Order these times from shortest time to longest time:

2 minutes 10 seconds

100 seconds

2 minutes 5 seconds

Key Fact

60 seconds = 1 minute

Ordering Time Units



Seconds and Minutes

Order these times from shortest time to longest time:

2 minutes 10 seconds

100 seconds

2 minutes 5 seconds

100 seconds

2 minutes 5 seconds

2 minutes 10 seconds

Key Fact

60 seconds = 1 minute

Ordering Time Units



Seconds and Minutes

Order these times from shortest time to longest time:

200 seconds

2 minutes 40 seconds

190 seconds

Key Fact

60 seconds = 1 minute

Ordering Time Units



Seconds and Minutes

Order these times from shortest time to longest time:

200 seconds

2 minutes 40 seconds

190 seconds

2 minutes 40 seconds

190 seconds

200 seconds

Key Fact

60 seconds = 1 minute

Ordering Time Units



Minutes and Hours

Key Fact

60 minutes = 1 hour

Here are three time measurements:

200 minutes 1 hour 40 minutes 240 minutes

?

How could you put them in order from shortest to longest time?



Tip: look for the one that is different from the others.

1 hour 40 minutes = 60 minutes + 40 minutes = 100 minutes

200 minutes 100 minutes 240 minutes

The order from shortest to longest time would be:

1 hour 40 minutes 200 minutes 240 minutes



Ordering Time Units



Minutes and Hours

Order these times from shortest time to longest time:

3 hours 40 minutes

300 minutes

3 hours 15 minutes

Key Fact

60 seconds = 1 minute

Ordering Time Units



Minutes and Hours

Order these times from shortest time to longest time:

3 hours 40 minutes

300 minutes

3 hours 15 minutes

3 hours 15 minutes

3 hours 40 minutes

300 minutes

Key Fact

60 seconds = 1 minute

Ordering Time Units



Minutes and Hours

Order these times from shortest time to longest time:

200 minutes

3 hours 50 minutes

220 minutes

Key Fact

60 seconds = 1 minute

Ordering Time Units



Minutes and Hours

Order these times from shortest time to longest time:

200 minutes

3 hours 50 minutes

220 minutes

200 minutes

220 minutes

3 hours 50 minutes

Key Fact

60 seconds = 1 minute

