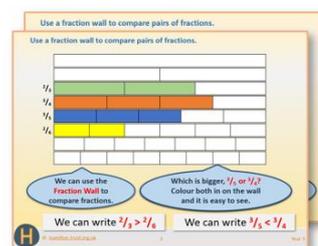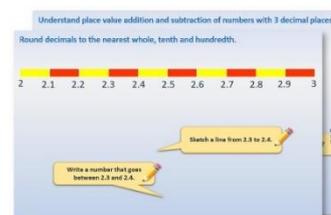# Week 12, Day 4
Right angle turns (1)

Each day covers one maths topic. It should take you about 1 hour or just a little more.
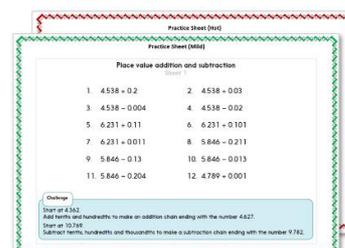
1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.

   OR start by carefully reading through the **Learning Reminders**.

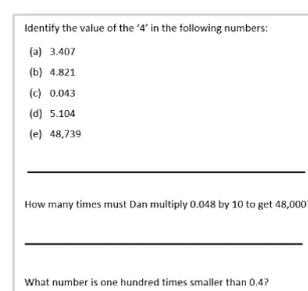2. Tackle the questions on the **Practice Sheet**.
   There might be a choice of either Mild (easier) or Hot (harder)!
   Check the answers.

3. Finding it tricky? That's OK… have a go with a grown-up at **A Bit Stuck?**
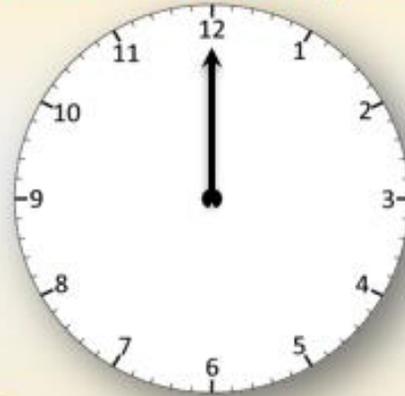
4. Have I mastered the topic? A few questions to **Check your understanding**.
   Fold the page to hide the answers!

Learning Reminders

Understand angles as an amount of turn and right angles as quarter turns.

Where does the minute hand point at quarter past?
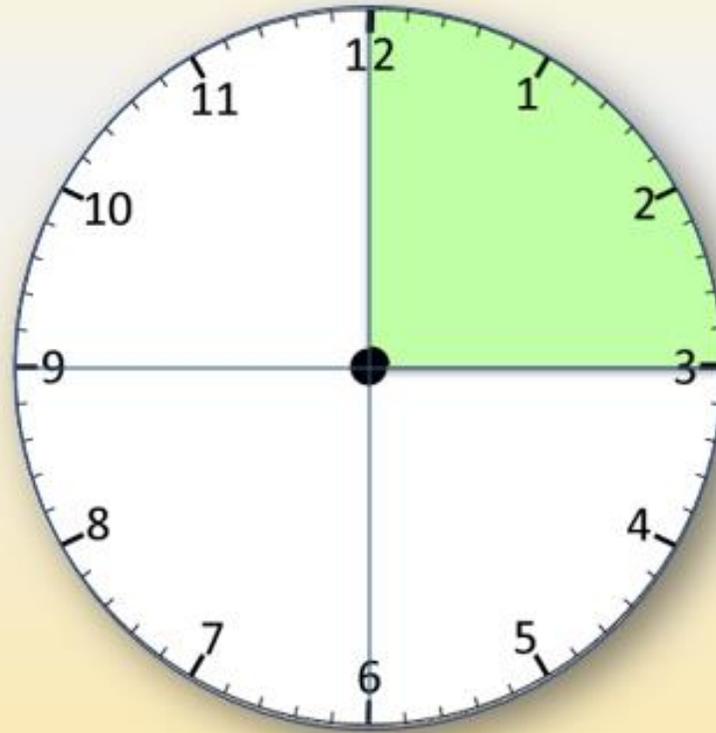
Where does it point at half past?

What about at quarter to?

Learning Reminders

Understand angles as an amount of turn and right angles as quarter turns.

This is a quarter of the clock face.

What is the angle between the lines?

It's a **right angle**; **90 degrees**; **90°**.

Learning Reminders

Understand angles as an amount of turn and right angles as quarter turns.

A right angle is a quarter turn.

When the big hand moves from 12 to 3, this is a quarter of a turn **clockwise**.

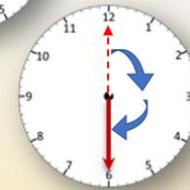Turning the other way is **anti-clockwise**.

How many right angles do you think make a complete turn around the clock?

Understand angles as an amount of turn and right angles as quarter turns.

1 right angle

2 right angles
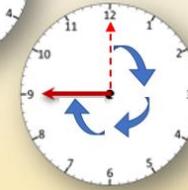
3 right angles
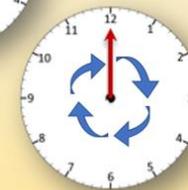
4 right angles

Angles and turns

To begin with, the arrow points to the top.
Write what colour the arrow will be on after each spin.
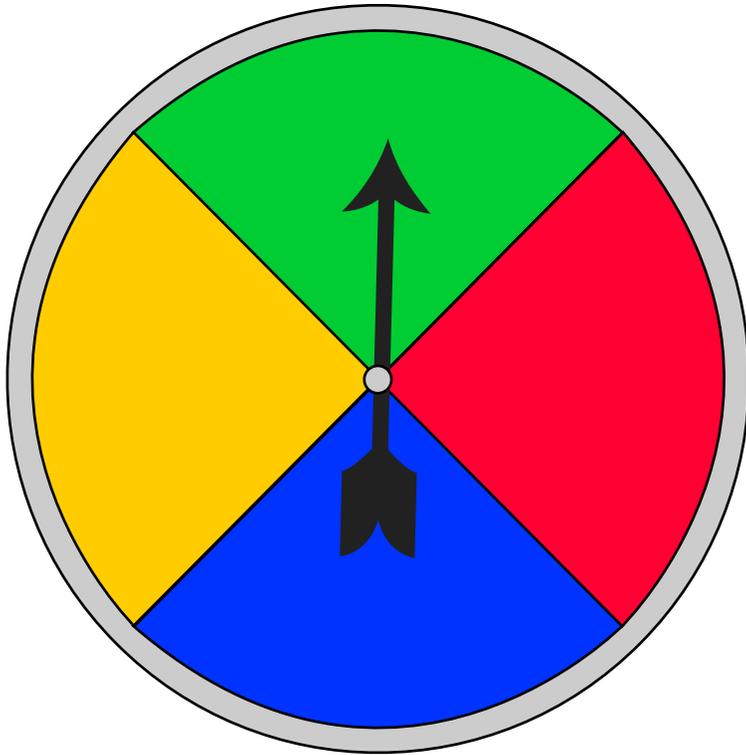
1. $\frac{1}{4}$ spin clockwise.

2. $\frac{1}{4}$ spin anticlockwise.

3. $\frac{1}{2}$ spin clockwise.

4. Two quarter turns clockwise.

5. Three quarter turns clockwise.

6. Three quarter turns anticlockwise.

7. One right angle turn anticlockwise.

8. Four right angle turns clockwise.

9. A 90 degree turn clockwise.

10. A 180 degree turn clockwise.

Practice Sheet Hot
Angles and turns

To begin with, the arrow points to the top.
Write what colour the arrow will be on after each spin.
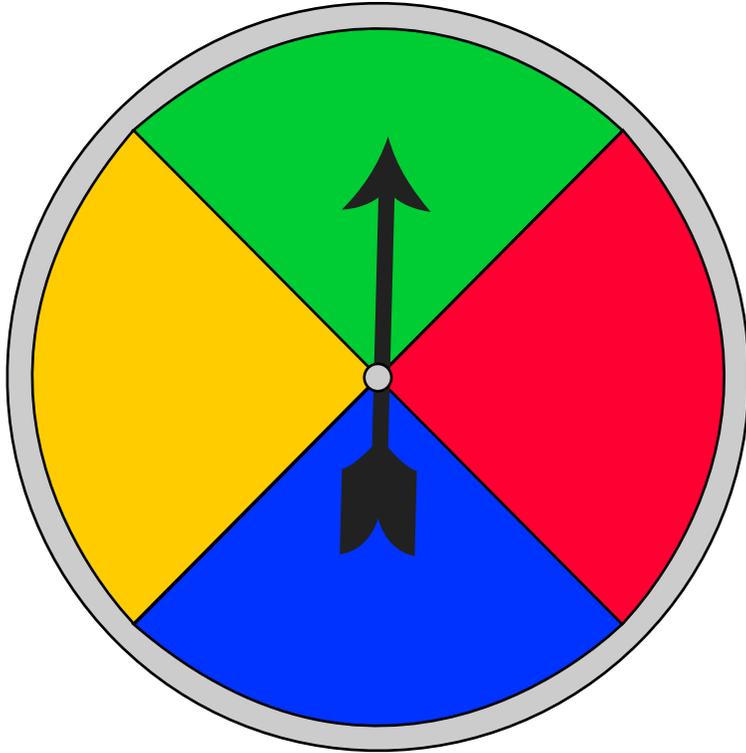
1. 90 degrees clockwise
2. 90 degrees anticlockwise
3. 180 degrees clockwise
4. 180 degrees anticlockwise
5. 270 degrees clockwise
6. 270 degrees anticlockwise
7. 360 degrees clockwise

The arrow starts in yellow.

   a. What spin would make it point to green?
   b. What spin would make it point to blue?

Practice Sheets Answers

Angles and turns (mild)

1. $\frac{1}{4}$ spin clockwise.   **Red**

2. $\frac{1}{4}$ spin anticlockwise.   **Yellow**

3. $\frac{1}{2}$ spin clockwise.   **Blue**

4. Two quarter turns clockwise.   **Blue**

5. Three quarter turns clockwise.   **Yellow**

6. Three quarter turns anticlockwise.   **Red**

7. One right angle turn anticlockwise.   **Yellow**

8. Four right angle turns clockwise.   **Green**

9. A 90 degree turn clockwise.   **Red**

10. A 180 degree turn clockwise.   **Blue**

Angles and turns (hot)

1. 90 degrees clockwise   **red**
2. 90 degrees anticlockwise   **yellow**
3. 180 degrees clockwise   **blue**
4. 180 degrees anticlockwise   **blue**
5. 270 degrees clockwise   **yellow**
6. 270 degrees anticlockwise   **red**
7. 360 degrees clockwise   **green**

The arrow starts in yellow.
  a. What spin would make it point to green?
     90 degrees clockwise or 270 degrees anticlockwise
  b. What spin would make it point to blue?
     90 degrees anticlockwise or 270 degrees clockwise

A Bit Stuck?
Directions for Kay

First, watch this video about Young Kay the bison at https://www.bbc.co.uk/bitesize/clips/z7kwmp3

Now write your own instructions for Kay's journey from the START to the FINISH.

Kay understands phrases like

- walk forward 3 squares
- take a quarter turn left
- take a quarter turn right.

> But these are not correct!
>
> So, write the correct instructions to get Kay from START to FINISH...

Check your understanding
Questions

Imagine a clock showing to 3 o'clock.

The minute hand moves clockwise through 3 right angles.

What is the time?

What is the angle between the hands of a clock at 6 o'clock?

_____

Write true or false for each statement.
   a.   A right angle is 100 degrees.
   b.   If you turn clockwise you turn to the right.
   c.   A quarter turn is 90 degrees.
   d.   A $^3/_4$ turn is 180 degrees
   e.   Two quarter turns clockwise will mean you face the same direction as two quarter turns anticlockwise.

_____

Check your understanding
Answers

Imagine a clock showing to 3 o'clock.

The minute hand moves clockwise through 3 right angles.

What is the time? 3:45 or quarter to 4.

What is the angle between the hands of a clock at 6 o'clock? 180 degrees

_____

Write true or false for each statement.
   a.   A right angle is 100 degrees.   False, it is 90 degrees.
   b.   If you turn clockwise you turn to the right.   True
   c.   A quarter turn is 90 degrees.   True
   d.   A $^3/_4$ turn is 180 degrees.   False, it is 270 degrees.
   e.   Two quarter turns clockwise will mean you face the same direction as two quarter turns anticlockwise.   True