


Year 3 Maths – week beginning 22.6.2020

Theme	Angles (Lesson 1 of 2) Acute, obtuse and right angles	Angles (Lesson 2 of 2) Making turns	Lines and Shapes (Lesson 1 of 3) Perpendicular, horizontal and vertical lines	Lines and Shapes (Lesson 2 of 3) Describing and drawing 2D shapes	Lines and Shapes (Lesson 3 of 3) Describing and making 3D shapes
Factual fluency (to aid fluency)	Match the calculation to the picture (10 questions)	4 times tables (10 questions)	8 times tables (10 questions)	Name the 2D shapes (10 questions)	Name the 3D shapes (10 questions)
<p>Problem/activity of the day</p> <p>Remember, just like in class, you can still show the depth of your knowledge LINK</p>	<p>(Lesson 1 resources below) MAKING LINKS: Before Easter, you learnt about angles. Where two straight lines meet at a point, they make an angle. You used a right-angle tester to find right angles. Make a new right-angle tester by folding a piece of paper in two and then folding it in two again. Look around the room and see how many right angles you can find. Today we will build on this to learn about other types of angles. Watch this video to trigger your prior learning.</p> <p>THINK: (support below)  Are there any angles that are larger than a right angle in the letters? Are there any angles that are smaller than a right angle in the letters? Our problem is on textbook page 206. Look at it now.</p> <p>SEE: (model below) Our problem and the solution is shown on page 206 of your textbook. Watch the lesson video here.</p> <p>DO: Use what you have learnt today to solve: Part 1: Questions 1-6 on pages 207-209 of your textbook. Check your answers before moving onto: Part 2: Workbook, Chapter 12, Worksheet 6, Pages 151-154</p>	<p>(Lesson 2 resources below) MAKING LINKS: Yesterday, you learnt that an acute angle is smaller than a right angle, and an obtuse angle is larger than a right angle. Today we are going to use this learning to make and describe different types of turns.</p> <p>THINK: (support below) In a game, you need to move your character from place to place while avoiding the monsters. How does your character turn to face the mountains, the tunnel and the sea? Our problem is on textbook page 210. Look at it now.</p> <p>SEE: (model below) Our problem and the solution is shown on pages 210 and 211 of your textbook. Watch the lesson video here.</p> <p>DO: Use what you have learnt today to solve: Part 1: Questions a, b and c on page 213 of your textbook. Check your answers before moving onto: Part 2: Workbook, Chapter 12, Worksheet 7, Pages 155-157.</p>	<p>(Lesson 3 resources below) MAKING LINKS: Before Easter, you learnt about perpendicular and parallel lines. You also learnt about vertical and horizontal lines. Today we will practise this learning.</p> <p>THINK: (support below) The pictures are rectangular in shape and are hanging upright on the wall. What can you say about the sides of the rectangles? Our problem is on textbook page 222. Look at it now.</p> <p>SEE: (model below) Our problem and the solution is shown on pages 222-223 of your textbook. Watch the lesson video here</p> <p>DO: Use what you have learnt today to solve: Part 1: Question 2 and 3 on page 218 of your textbook, Question 2 and 3 on page 221 of your textbook, Question 2 on page 224 of your textbook. Check your answers before moving onto: Part 2: Workbook, Chapter 13: Worksheet 1, Question 1, 2a and 2b (pages 161-162) Worksheet 2, Question 1, 2a and 3a (pages 165-167) Worksheet 3, Question 1 and 2 (page 169)</p>	<p>(Lesson 4 resources below) MAKING LINKS: Yesterday, you practised recognising perpendicular, parallel, horizontal and vertical lines. In year 2, you learnt to recognise and describe 2D shapes using the language of sides and vertices. Today, we will describe 2D shapes using our knowledge of angles and lines.</p> <p>THINK: (support below) How can we describe the shape? Our problem is on textbook page 225. Look at it now.</p> <p>SEE: (model below) Our problem and the solution is shown on pages 225-227 of your textbook. Watch the lesson video here</p> <p>DO: Use what you have learnt today to solve: Part 1: Questions 1, 2 and 3 on page 227 of your textbook. Check your answers before moving onto: Part 2: Workbook, Chapter 13, Worksheet 4, Pages 171-173 <u>and</u> Worksheet 5, Question 1, Page 174.</p>	<p>(Lesson 5 resources below) MAKING LINKS: Yesterday, you learnt to describe and draw two-dimensional shapes. In year 2, you learnt to recognise and describe 3D shapes using the language of faces, edges and vertices. Today, we will describe 3D shapes using our knowledge of lines. Watch this video to trigger your prior learning.</p> <p>THINK: (support below) The edges of the box are lines. Describe the edges. Our problem is on textbook page 236. Look at it now.</p> <p>SEE: (model below) Our problem and the solution is shown on pages 236-237 of your textbook. Watch the lesson video here</p> <p>DO: Use what you have learnt today to solve: Part 1: Questions 1 and 2 on page 238 of your textbook. Check your answers before moving onto: Part 2: Workbook, Chapter 13, Worksheet 6, Question 1, Page 176; Worksheet 7, Question 1, Page 178; and Worksheet 8, Questions 1 and 2, Pages 180-181.</p>
Methods, tips, clues & checks	Day 1 resources and answers below	Day 2 resources and answers below	Day 3 resources and answers below	Day 4 resources and answers below	Day 5 resources and answers below

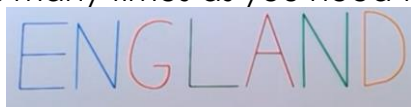


DAY 1 RESOURCES:

Before you start today's think task, [watch this video](#) to trigger your prior learning on right angles, and make a right-angle tester from a piece of paper to use in your lessons this week.

THINK:

Look at page 206 of your textbook now. Be sure to read all of the information as many times as you need to understand.



Are there any angles that are larger than a right angle in the letters?

Are there any angles that are smaller than a right angle in the letters?

DO:

Part 1:

Complete questions 1-6 on pages 207-209 of your textbook.

Use your right angle tester to help you.

Check your answers below.

Part 2:

Complete worksheet 6 on pages 151-154 of your workbook.

Deepening:

Complete the mind workout on page 213 of your textbook.

How many acute angles can you find in the figure?

There are more than 3 acute angles!

SEE:

Check the solution on page 206 of your textbook.

[Watch the lesson video here.](#)



These are **right angles**.

Right angles are 90° .



An **acute** angle is smaller than a right angle.

These are acute angles.



These are acute angles too.

They are smaller than 90° .



These are larger than a right angle.

We call them **obtuse** angles.

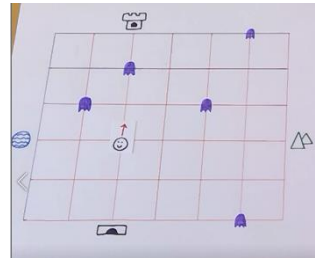
Obtuse angles are larger than 90° .

DAY 2 RESOURCES:

THINK:

Look at page 210 of your textbook now. Be sure to read all of the information as many times as you need to understand.

In a game, you need to move your character from place to place while avoiding the monsters.



How does your character turn to face the mountains, the tunnel and the sea?

DO:

Part 1:

Complete questions a, b and c on page 213 of your textbook.

Use an object that you can physically turn to help you.
Is there more than one way to do it?

Check your answers below.

Part 2:

Complete worksheet 7 on pages 155-157 of your workbook.

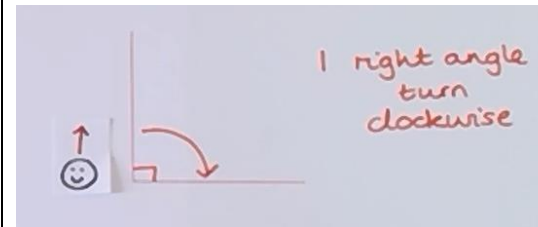
Deepening:

Design your own game like the one in the think task. Write instructions for how your character needs to turn to face each location. Use the language of clockwise, anti-clockwise, right angle, half turn, quarter turn, three-quarters of a turn and full turn.

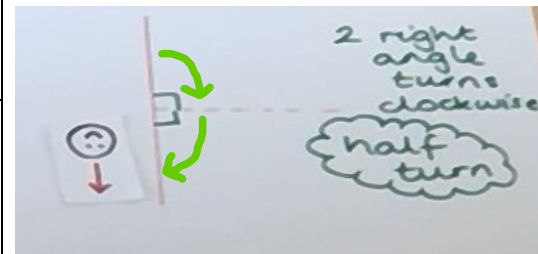
SEE:

Check the solution on pages 210-211 of your textbook.

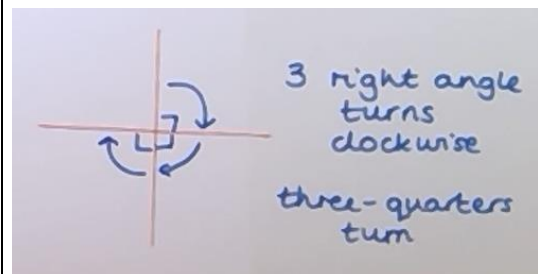
[Watch the lesson video here.](#)



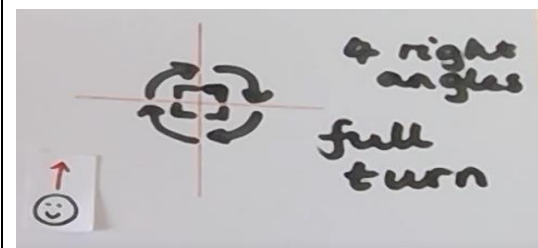
To turn to face the mountains, the character needs to turn 1 right angle clockwise.
This is a quarter of a turn.



To turn to face the tunnel, the character needs to turn 2 right angles clockwise.
This is a half turn.
Could he make a half turn anti-clockwise instead, and still face the tunnel?



To turn to face the sea, the character needs to turn 3 right angles clockwise.
This is three-quarters of a turn.
What if he turned anti-clockwise?
What turn would he need to make then?



If the character turns 4 right angles, he will face the same direction he started in.
This is a full turn.
4 right angles = 1 full turn
Does it matter which direction he turns in?

DAY 3 RESOURCES:

THINK:

Look at page 222 of your textbook now. Be sure to read all of the information as many times as you need to understand.

The pictures are rectangular in shape and are hanging upright on the wall.

What can you say about the sides of the rectangles?

DO:

Part 1:

Complete:

- Questions 2 and 3 on page 218 of your textbook
- Questions 2 and 3 on page 221 of your textbook
- Question 2 on page 224 of your textbook

Check your answers before moving onto:

Part 2:

Complete the following questions in chapter 13 of your workbook:

- Worksheet 1, Questions 1, 2a and 2b (pages 161-162)
- Worksheet 2, Questions 1, 2a and 3a (pages 165-167)
- Worksheet 3, Questions 1 and 2 (page 169)

Deepening:

Can you find perpendicular lines in the letter T?

Can you find parallel lines in the letter W?

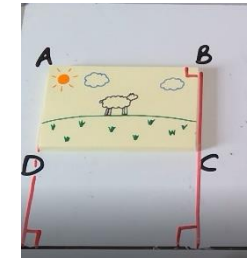
In TEN, T has only perpendicular lines, N has only parallel lines and E has both.

What other words in the English language are like TEN?

SEE:

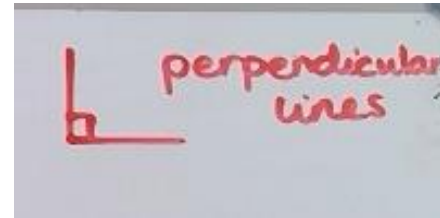
Check the solution on pages 222-223 of your textbook.

[Watch the lesson video here.](#)



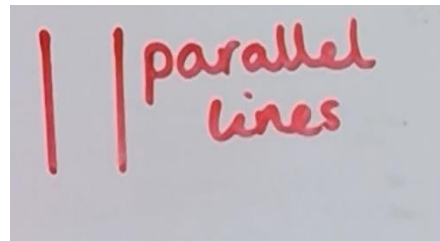
Two straight lines that meet at a right angle are called **perpendicular lines**.

Line BC is perpendicular to the floor.
Line AD is also perpendicular to the floor.
Line BC is also perpendicular to line AB and line DC.



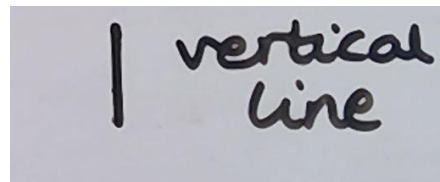
Two lines that do not meet at a point and do not make an angle, no matter how long they are drawn, are called **parallel lines**.

Line AD is parallel to line BC.
Line AB is parallel to line DC and the floor.



Lines that are perpendicular to the floor are called **vertical lines**. Vertical lines are parallel to each other.

Lines AD and BC are both vertical lines.



Lines that are parallel to the floor are called **horizontal lines**.

Lines AB and DC are both horizontal lines.



THINK:

Look at page 225 of your textbook now. Be sure to read all of the information as many times as you need to understand.

How can we describe the shape?

A right-angle tester will be important for today's lesson.

DO:

Part 1:

Complete questions 1, 2 and 3 on page 227 of your textbook.

Check your answers below.

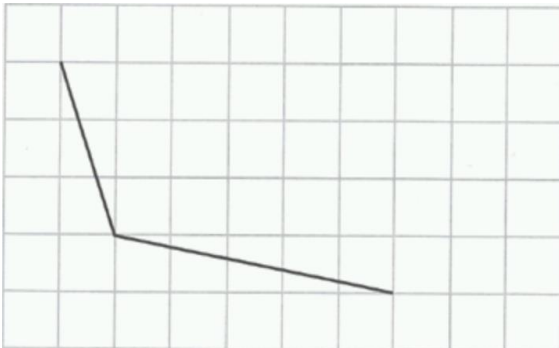
Part 2:

Complete worksheet 4 on pages 171-173 of your workbook and question 1 of worksheet 5 on page 174 of your workbook.

Remember to use a ruler.

Deepening:

Draw two more lines on the grid to make a shape with two pairs of parallel sides. Use a ruler.



Is there more than one way to do it?
How do you know?

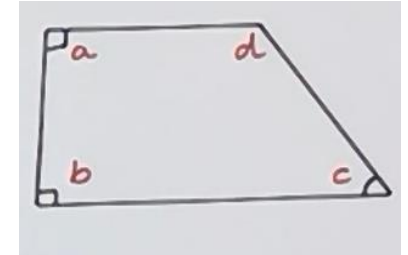
SEE:

Check the solution on pages 225-227 of your textbook.

[Watch the lesson video here.](#)

Angles of the shape

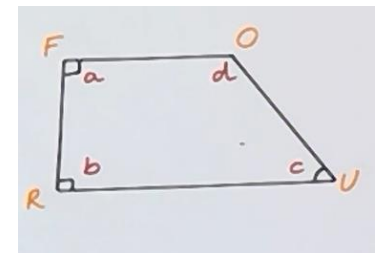
- There are 4 angles.
- I used letters to name the angles to help me describe them.
- Angles a and b are **right angles**. I checked with my right-angle tester.
- Angle c is an **acute angle** because it is smaller than a right angle.
- Angle d is an **obtuse angle** because it is larger than a right angle.
- I can also say that the shape has 4 **vertices** (where two straight sides meet).



Images are not to scale. Please refer to the images in the textbook to measure the angles.

Sides of the shape

- There are 4 sides so the shape is a quadrilateral.
- I used letters to name the sides to help me describe them.
- FR is **perpendicular** to FO.
- FR is also perpendicular to RU.
- FO is **parallel** to RU.




Images are not to scale. Please refer to the images and the ruler drawn in the textbook to measure the sides.

Lengths of the sides

- FO is about 5cm
- OU is about 5cm
- FR is about 4cm
- RU is about 8cm

DAY 5 RESOURCES:

Before you start today's think task, [watch this video](#) to trigger your prior learning about 3D shapes.



Name	Faces	Edges	Vertices
cube	6	12	8
cuboid	6	12	8
cylinder	3	2	0
prism	5	9	6
pyramids	5	4	8
sphere	1	0	0

THINK:

Look at page 236 of your textbook. Be sure to read all of the information as many times as you need to understand.

The edges of the box are lines.
Describe the edges.

DO:

Part 1:

Complete questions 1 and 2 on page 238 of your textbook.

You might find it helpful to make the objects using cocktail sticks and sellotape or blu tac.

Check your answers below.

Part 2:

Complete the following questions in chapter 13 of your workbook:

- Question 1 of worksheet 6, page 176
- Question 1 of worksheet 7, page 178
- Questions 1 and 2 of worksheet 8, pages 180-181

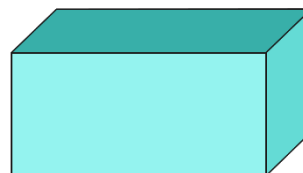
Deepening:

Does a sphere have any perpendicular, parallel, horizontal or vertical lines? Why/why not?

SEE:

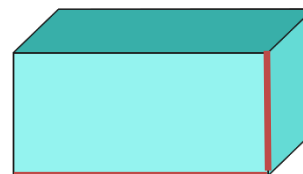
Check the solution on pages 236-237 of your textbook.

[Watch the lesson video here.](#)



An edge is where two faces meet.

A cuboid has 12 **edges**.



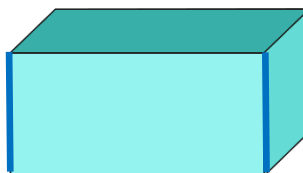
These two lines are **perpendicular**.

Are there more pairs of perpendicular lines?



These lines are **parallel**.

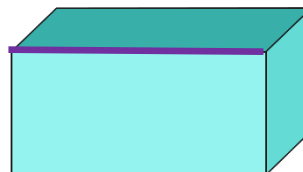
Look for other pairs of parallel lines.



The box sits on a table.

These are **vertical** lines.



Are there only three vertical lines?




This is a **horizontal** line.

How many horizontal lines does the box have?

ANSWERS – part 1:

<u>Day 1</u>	<u>Day 2</u>	<u>Day 3</u>	<u>Day 4</u>	<u>Day 5</u>
<p>Q1. Answers may vary. Angle must be greater than a right angle.</p> <p>Q2. a) larger, b) smaller</p> <p>Q3. a) obtuse angle, b) right angle, c) acute angle, d) right angle, e) obtuse angle, f) acute angle</p> <p>Q4. right angle, acute angle, obtuse angle</p> <p>Q5. X – yes, Y – yes, Z – no</p> <p>Q6. a and e – right angles, b and d – obtuse angles, c – acute</p>	<p>Q1. a) 1 right angle turn anti-clockwise OR 3 right angle turns clockwise</p> <p>b) 2 right angle turns either direction</p> <p>c) 1 right angle turn clockwise OR 3 right angle turns anti-clockwise</p>	<p>Page 218: Q2.QRS Q3.EFGH</p> <p>Page 221: Q2.EF and GH are parallel Q3.AD and BC, AB and DC EH and FG, EF and HG KN and LM, KL and NM PQ and SR</p> <p>Page 224: Q2.a) 5 from: AB, BC, DE, EF, FG, HI, IJ, AC, DF, EG, DG, HJ b) AD, BE, CG or DH, FI, GJ</p>	<div style="text-align: center;">  </div> <p>Q1. The square has 4 vertices and 4 right angles. The square has 4 sides that are equal in length. AB is perpendicular to AC and BC. AB is parallel to CD. AC is parallel to BD. CD is perpendicular to AC and BD.</p> <div style="text-align: center;">  </div> <p>Q2. The rectangle has 4 vertices and 4 right angles. The rectangle has 4 sides. AB is perpendicular to AC and BD. CD is perpendicular to AC and BD.</p> <p>Q3. The triangle has 3 vertices. It has one obtuse angle and two acute angles. The triangle has 3 sides. There are no parallel or perpendicular lines.</p>	<p>Q1. Answers may vary, but could be: Object 1: FG and HI Object 2: KR and NO Object 3: WZ and ZY</p> <p>Q2. a) Object 1, b) EF, BD, DG</p>

ANSWERS – part 2 and deepening:

<u>Day 1</u>	<u>Day 2</u>	<u>Day 3</u>	<u>Day 4</u>	<u>Day 5</u>
<p>Q1. a) acute, b) obtuse, c) obtuse, d) right angle, e) acute, f) obtuse</p> <p>Q2. No angle: C No obtuse angle: V, F, E, H, Z, N, W 1 obtuse angle: Y 2 obtuse angles: A, X, K</p> <p>Q3. a) 2, b) 5, c) 2, d) 1, e) 2, f) 0</p> <p>Q4. a) acute angle, b) obtuse angle</p> <p>Deepening: There are 6 acute angles.</p>	<p>Q1. a) 3 right angle turns anticlockwise b) 2 right angle turns clockwise c) 1 right angle turn anti-clockwise</p> <p>Q2. a) shopping mall b) church c) 3 right angle turns anti-clockwise and 1 right angle turn clockwise d) park e) church f) park</p> <p>Deepening: Answers may vary.</p>	<p>Worksheet 1: Q1. c, d and e are perpendicular Q2. a) AB is perpendicular to BC b) PQ is perpendicular to QR, QR is perpendicular to RS</p> <p>Worksheet 2: Q1. c and f are parallel Q2. a) EF is parallel to GH Q3. a) AB is parallel to DC, AD is parallel to BC</p> <p>Worksheet 3: Send your answers to your teacher for checking on Seesaw.</p> <p>Deepening: Yes, there are perpendicular lines in the letter T. Yes, there are parallel lines in the letter W. Answers may vary for other words like TEN. Send answers to your teacher for checking.</p>	<p>Worksheet 4: Q1. a) There are 4 angles. Each angle is a right angle. b) There are 3 angles. There is 1 right angle. There are 2 acute angles. c) There are 4 angles. Angles b and d are acute. Angles a and c are obtuse.</p> <p>Q2. a) There are 4 sides. The perpendicular sides are AB and BC, AD and DC, or BC and DC, AB and AD. The parallel sides are AB and DC, AD and BC. b) The shape has 6 sides. EF is parallel to IH. JE is parallel to HG. JI is parallel to FG. Q3. a) AB is about 5cm, AC is about 5cm and BC is about 6cm. b) EF is about 5cm, EH is about 4cm, HG is about 6cm and FG is about 4cm. c) KL is about 7cm, KN is about 3cm. KN and LM have the same length. KL and NM have the same length.</p> <p>Worksheet 5: Question 1: Answers may vary.</p> <p>Deepening:</p>  <p>There is not more than one way to do it because if one of the sides was drawn differently, the shape wouldn't have 2 pairs of parallel sides.</p>	<p>Worksheet 6: Q1. a) matches to the pyramid, b) matches to the cube, c) matches to the prism, d) matches to the cuboid</p> <p>Worksheet 7: Q1. cone, cube, cylinder, pyramid, sphere, prism, cuboid</p> <p>Worksheet 8: Q1. a) Horizontal: BC, AD, FG, EH, AB, EF, DC, HG Vertical: AE, BF, DH, CG b) AB is perpendicular to BF. (Answers may vary) c) AB is parallel to DC. (Answers may vary)</p> <p>Q2. a) PQ and ST, PR and SU, PS and RU, QT and RU, QR and TU, PS and QT b) PR, PS, QT c) 9</p> <p>Deepening: No, a sphere doesn't have any perpendicular, parallel, horizontal or vertical lines because a sphere doesn't have any edges.</p>