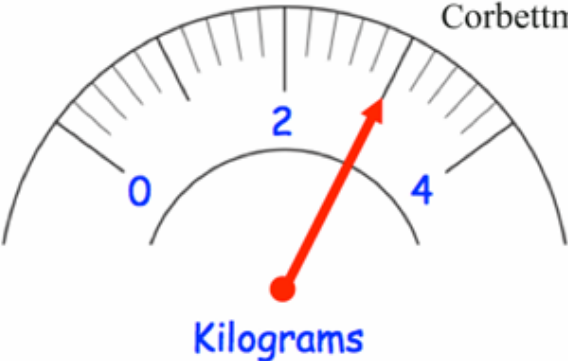


Lesson Title:

Understand and use the angle properties of parallel lines

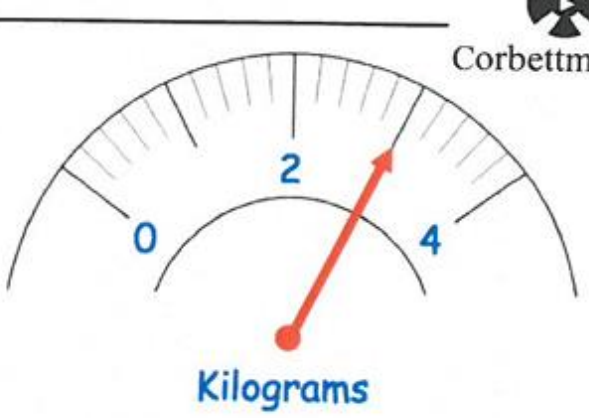
Starter activity:

Martha is buying carrots. The scale shows the amount she buys. What amount of carrots does she buy?	 Corbett Maths
Write the following numbers in order of size. Start with the smallest number. 0.51 0.2 0.19 0.203 0.6	



Lesson Title: Understand and use the angle properties of parallel lines

Starter activity:

Martha is buying carrots. The scale shows the amount she buys What amount of carrots does she buy? 3 kg	 Corbettmαths
Write the following numbers in order of size. Start with the smallest number. 0.51 0.2 0.19 0.203 0.6	0.19, 0.2, 0.203, 0.51, 0.6



Why Learn this?



Understanding the angle properties of parallel lines helps people make sure things line up correctly. For example, a **road engineer** uses them to lay out safe roads, and an **electrician** uses them to run cables neatly and accurately.



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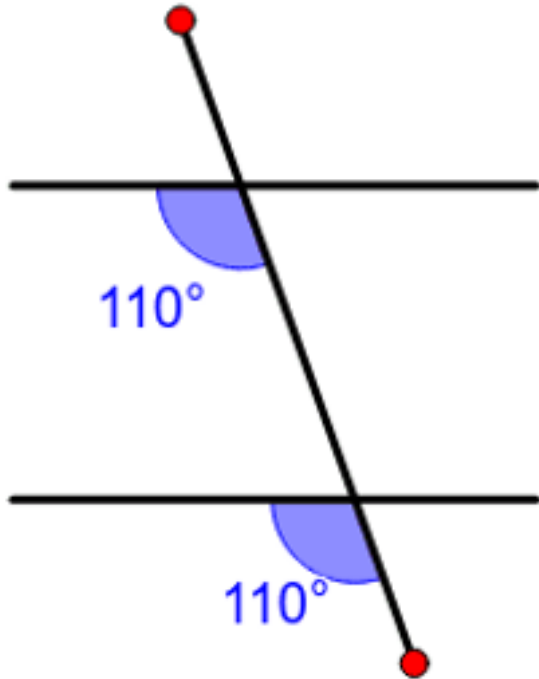
Keywords:

- ▶ **Parallel lines:** Lines that **never meet** and stay the same distance apart.
- ▶ **Transversal:** A line that crosses two or more other lines.
- ▶ **Supplementary:** Two angles that **add up to 180°** (used for co-interior angles).



Modelling:

Corresponding Angles



- Definition:** Angles in the **same position** at each intersection where a transversal crosses parallel lines.

- Property:** Corresponding angles are **equal** when the lines are parallel.

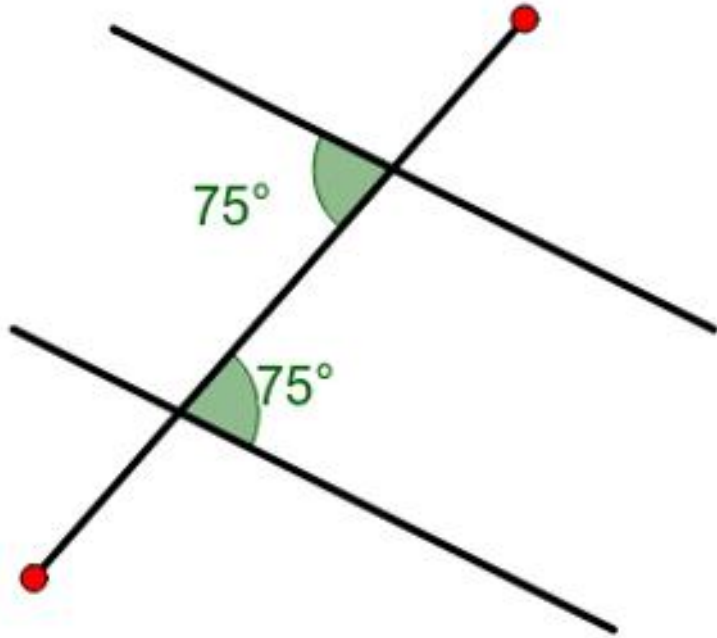
- Visual cue:** They “match up” like a pair of twins. F angle.



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Modelling:

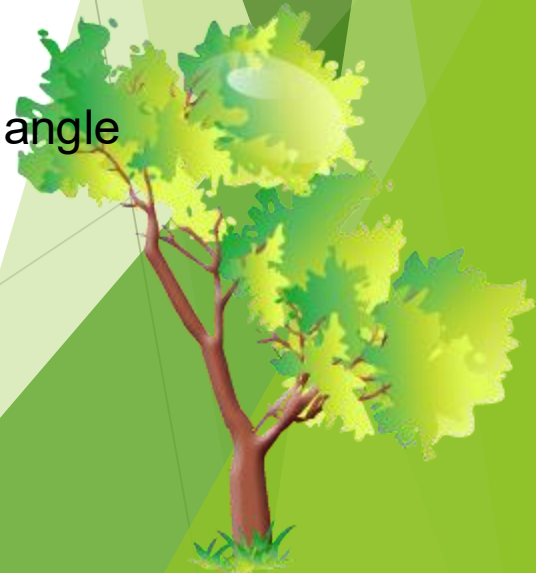
Alternate Angles



- Definition:** Angles on opposite sides of a transversal line, inside two parallel lines.

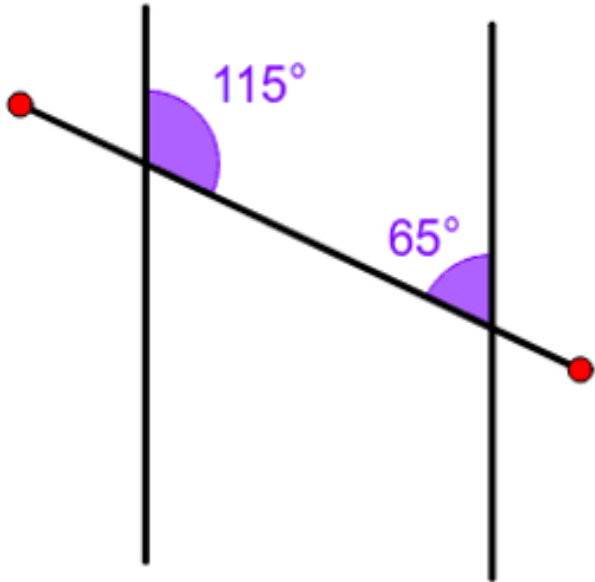
- Property:** Alternate angles are **equal** when the lines are parallel.

- Visual cue:** They “zig-zag” across the transversal. Z angle



Modelling:

Co-interior Angles



- Definition:** Angles on the **same side** of a transversal, inside two parallel lines.

- Property:** Co-interior angles **add up to 180°** (supplementary) when lines are parallel.

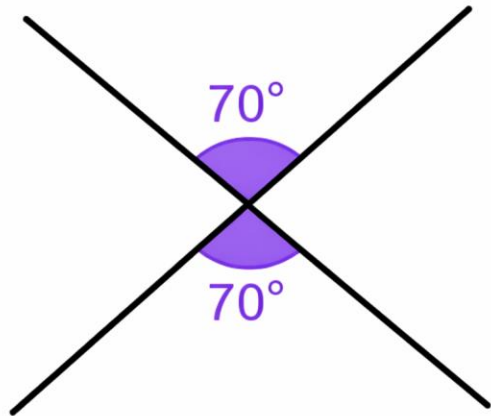
- Visual cue:** They “sit together” like a straight line. C Angle.



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Modelling:

Vertically Opposite Angles



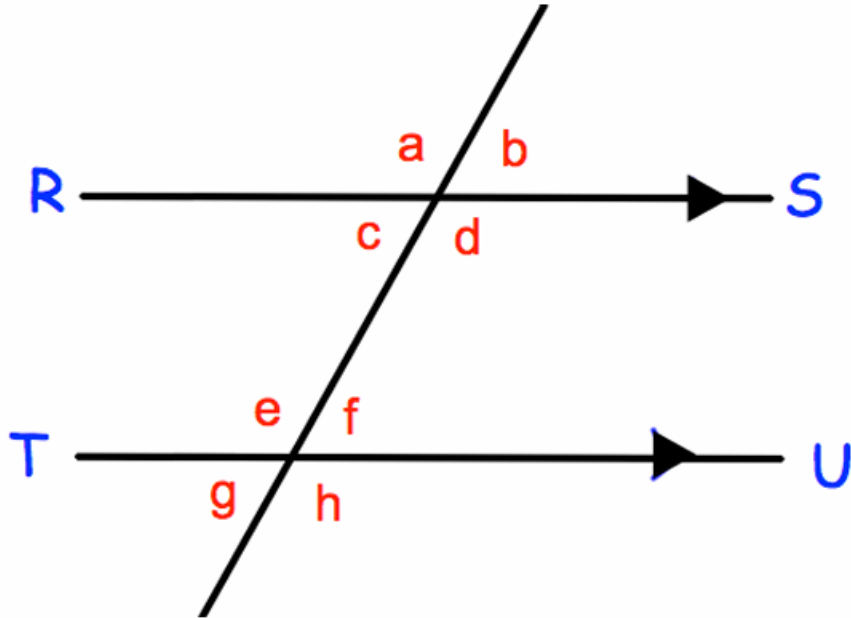
- **Definition:** Angles **opposite each other** when two lines cross.
- **Property:** Vertically opposite angles are always **equal**.
- **Visual cue:** They form an “X” shape at the intersection.



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Modelling:

On the diagram RS is parallel to TU.



(a) Which angle is vertically opposite to angle g ?

.....
(1)

(b) Which angle is corresponding to angle a ?

.....
(1)

(c) Which angle is alternate to angle c ?

.....
(1)

(d) Which angle is corresponding to angle h ?

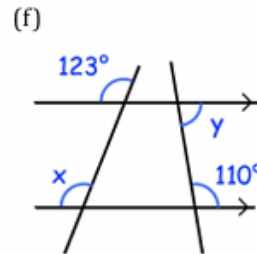
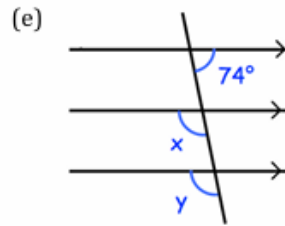
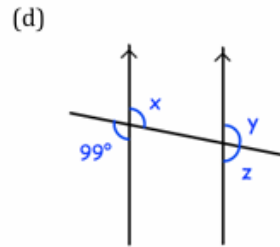
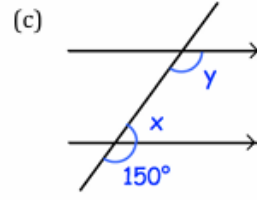
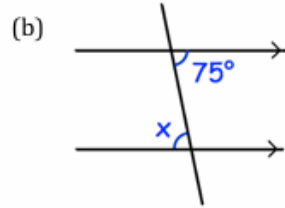
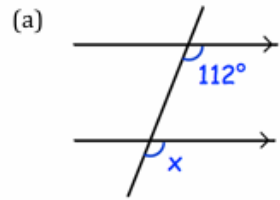
.....
(1)

(e) Which angle is alternate to angle d ?

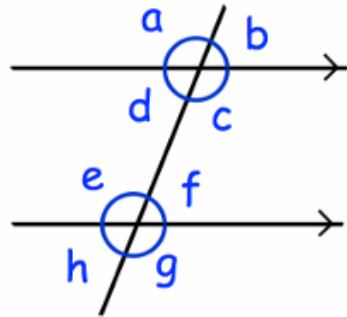
.....
(1)

06/01/2026 Independent Practice:

Question 1: Write down the sizes of the lettered angles.



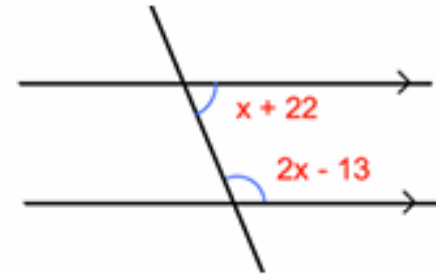
Question 2:



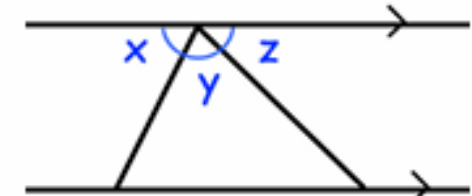
- Which angle is corresponding to angle c?
- Which angle is alternate to angle d?
- Which angle is corresponding to angle h?
- Which angle is vertically opposite to angle a?
- Which angle is alternate to angle e?
- Which angle is co-interior with angle c?
- Which angle is vertically opposite to angle h?
- Which angle is co-interior with angle e?
- Which angle is corresponding to angle a?
- Which angle is vertically opposite to angle g?

Stretch

Find x



Matilda is proving that the angles in a triangle add up to 180° . She has started with this diagram. Complete her proof.



06/01/2026 Independent Practice: Answers

Question 1:

(a) $x = 112^\circ$

(b) $x = 75^\circ$

(c) $x = 30^\circ$ $y = 150^\circ$

(d) $x = 99^\circ$ $y = 99^\circ$ $z = 81^\circ$

(e) $x = 106^\circ$ $y = 106^\circ$

(f) $x = 123^\circ$ $y = 70^\circ$

Question 2:

(a) angle g

(b) angle f

(c) angle d

(d) angle c

(e) angle c

(f) angle f

(g) angle f

(h) angle d

(i) angle e

(j) angle e

Stretch

$$x = 57^\circ$$

$x + y + z = 180^\circ$ as they are on a straight line.

Considering alternate angles, the two angles inside the triangle are x and z . So the three angles in the triangle are x , y and z .

Therefore the angles in the triangle add up to 180°



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Plenary:

