

Warm Up Challenge

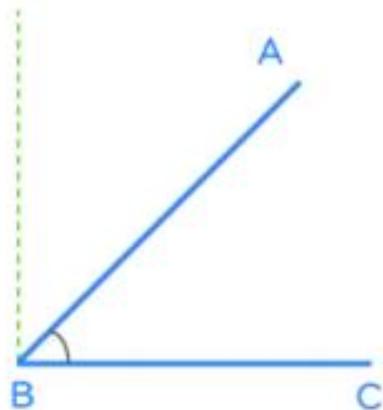
Warm your brains up thinking about the following questions:

Acute, obtuse and reflex angles

Here are some other types of angles. Complete the sentences.

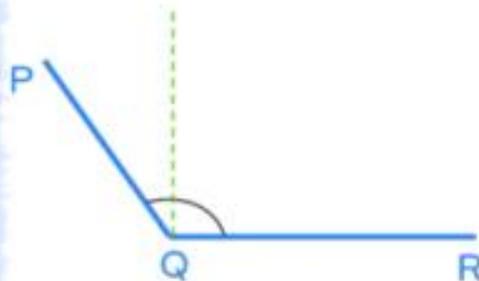
Acute angle:

measures
than a right angle.



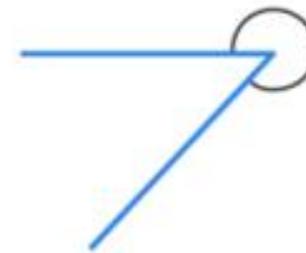
Obtuse angle:

measures
than a right angle
but than
a straight angle.



Reflex angle:

measures
than a straight angle
but than
a whole turn.



Warm your brains up thinking about the following questions:

Warm Up Challenge

1. Select the correct words from the box.

right

reflex

acute

obtuse

- a) An angle less than 90° is
- b) An angle equal to 90° is
- c) An angle more than 90° and less than 180° is
- d) An angle greater than 180° and less than 360° is
2. a) Angles at a point add up to
- b) Angles on a straight line add up to

Right angle

Angles are often measured in degrees. The symbol for degrees is $^{\circ}$.

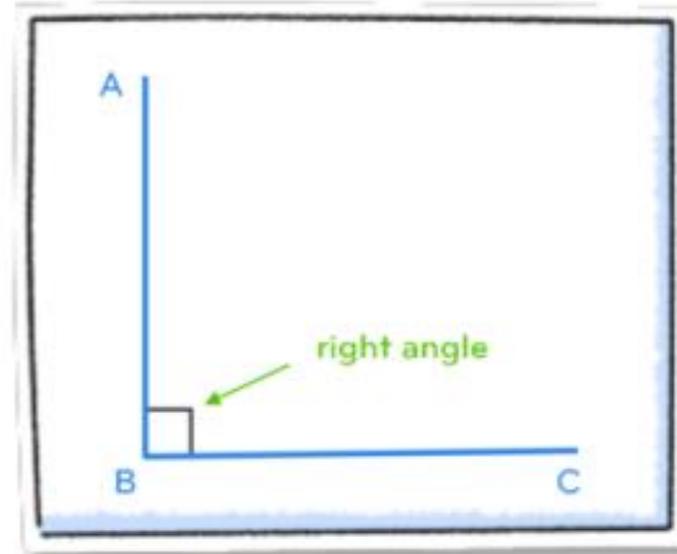


A right angle measures 90 degrees.

Write this using the degree symbol.

A **right angle** is the same as a quarter of a turn.

We mark right angles like this:



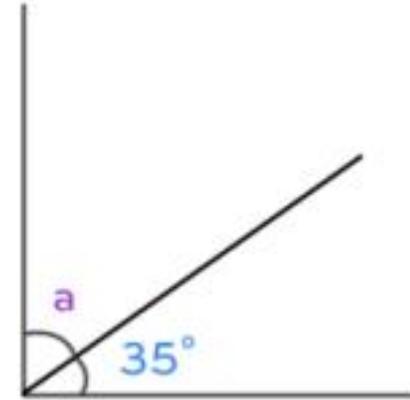
Missing angles

Find the missing angle.

The **right angle** is divided into two angles.

You can use letters to represent the angles.

Let **a** stand for the **missing angle**.



To find a **missing angle** in a right angle, you can subtract the **given angle** from 90. So, you know:

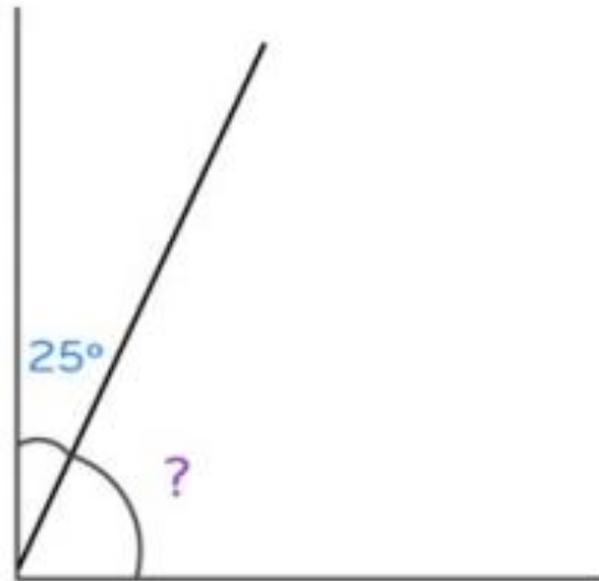
$$a = 90 - 35$$

$$= 90 - 35$$

So, the missing angle measures

Missing angles

Find the missing angle.



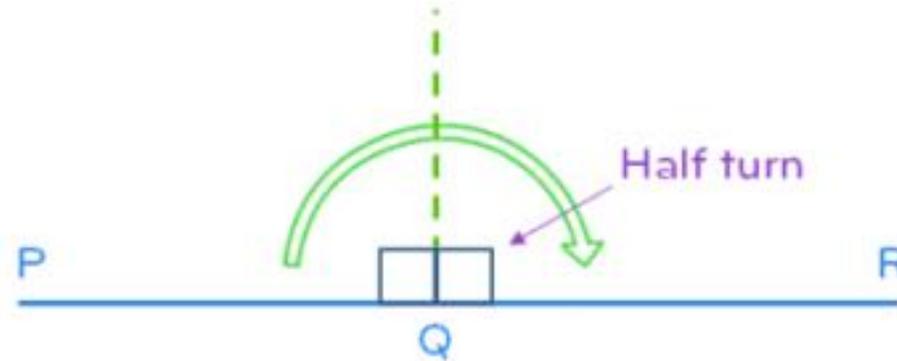
Remember,
a right angle
is 90°

Straight angle

A straight angle is an angle made on a straight line.

A straight angle is the same as a half turn.

A half turn = 2 right angles.



A straight angle = 2 right angles

1 right angle is
 90°

How many degrees is a straight angle?

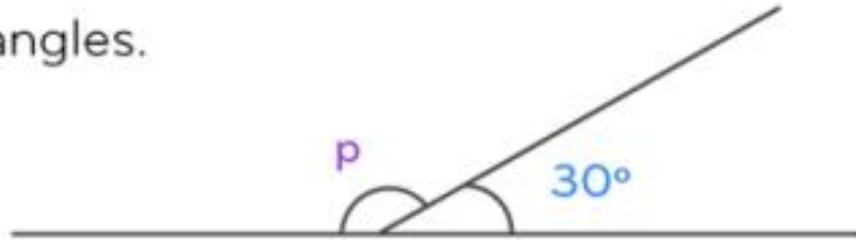
Missing angles

Find the missing angle.

The **straight angle** is divided into two angles.

You can use letters to represent the angles.

Let **p** stand for the **missing angle**.



To find a **missing angle** in a straight angle, you can subtract the **given angle** from 180. So, you know:

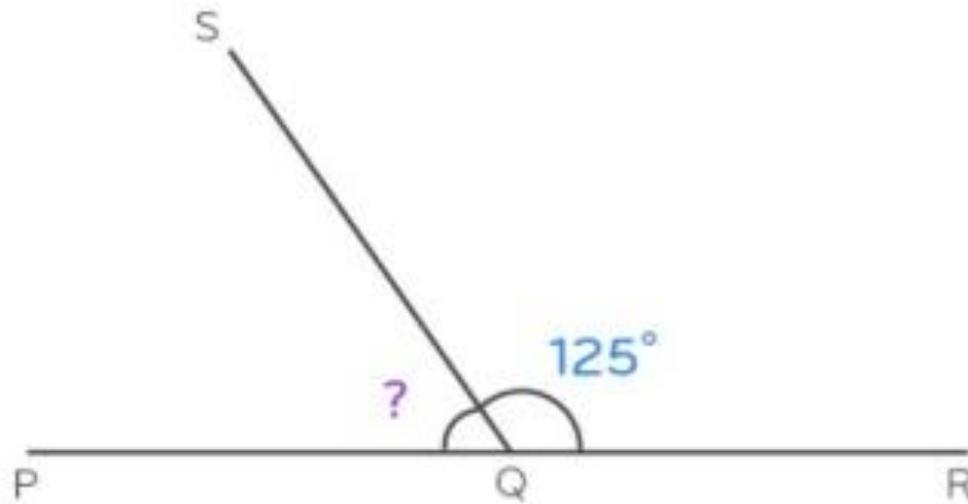
$$p = 180 - 30$$

$$= 180 - 30$$

So, the missing angle measures

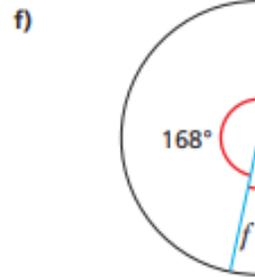
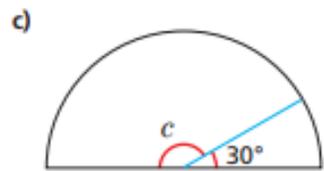
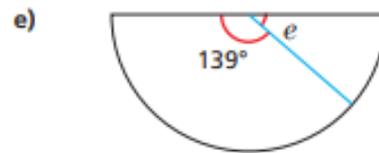
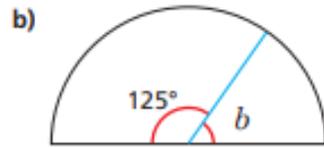
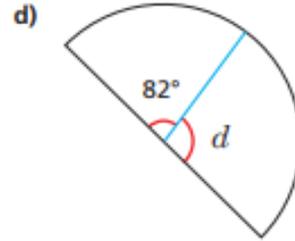
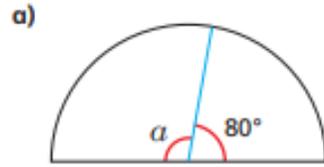
Missing angles

Find the missing angle.

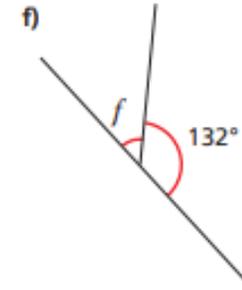
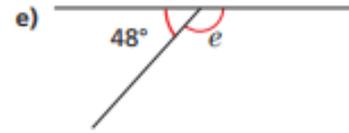
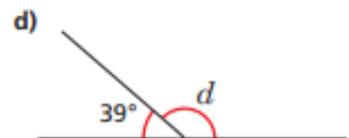
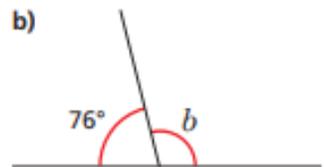
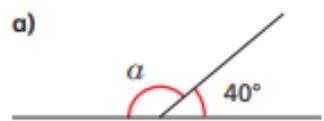


Remember,
a straight angle
is 180°

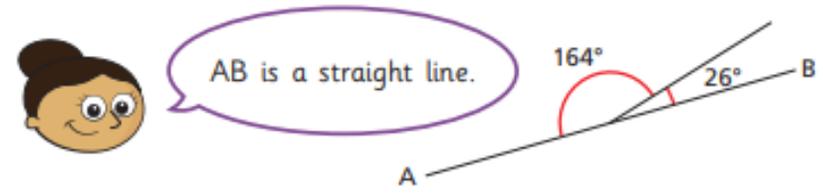
1 Work out the sizes of the unknown angles.



2 Work out the size of the unknown angles.



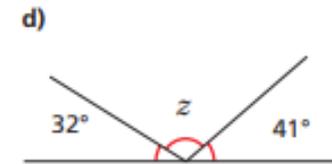
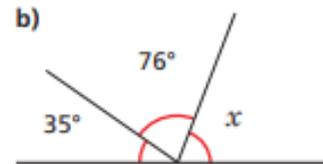
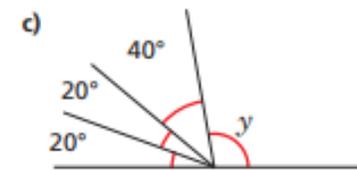
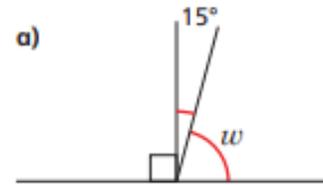
3 Dora draws two angles.

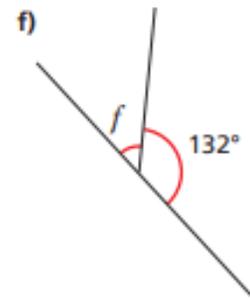
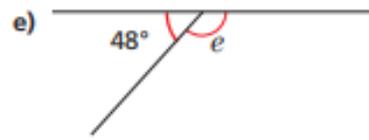


Do you agree with Dora?
Explain your answer.

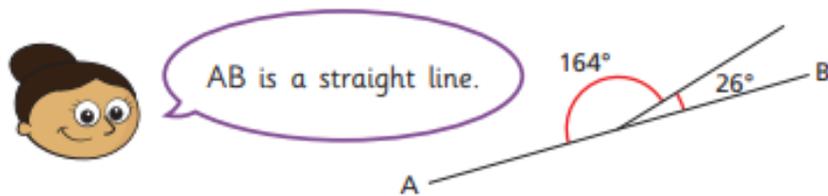
4 Work out the size of the unknown angles.

Show the steps in your working.





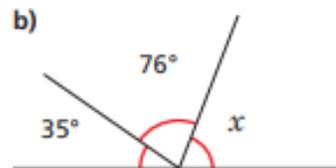
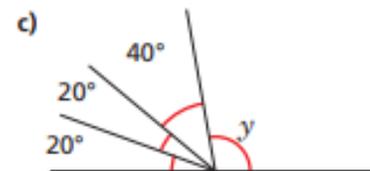
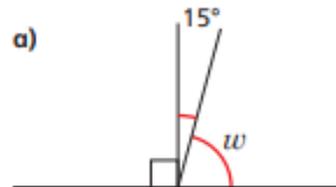
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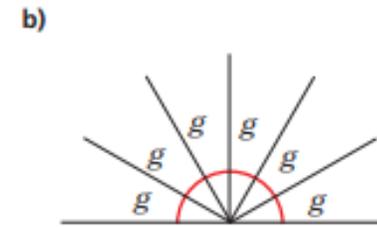
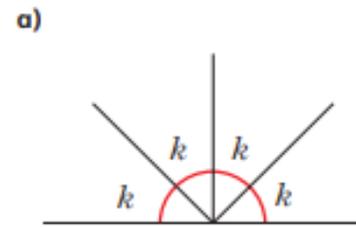
Do you agree with Dora?
Explain your answer.

4 Work out the size of the unknown angles.

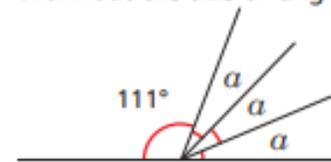
Show the steps in your working.



5 Work out the sizes of the unknown angles.

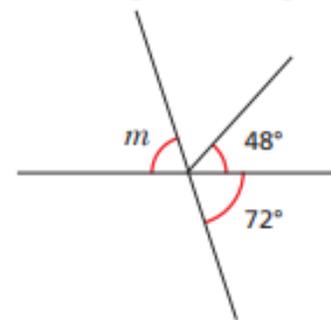


6 Work out the size of angle a .



7 Work out the size of angle m .

Show all your working out.



8 Two angles are marked.

Angle b is eight times the size of angle a .
What is the size of each angle?

