

## Finding angles

### Starter

1. (Review of last lesson)

Make  $x$  the subject: (a)

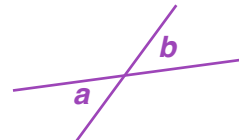
$$a(x + c) = x - 7$$

(b)  $y = \frac{x(4 + p)}{a + x}$

2. (Review of previous material) Add a short phrase to complete each angle fact.

- (a) Angles on a straight line \_\_\_\_\_.
- (b) Angles at a point \_\_\_\_\_.
- (c) Vertically opposite angles \_\_\_\_\_.
- (d) Angles in a triangle \_\_\_\_\_.
- (e) Equilateral triangles \_\_\_\_\_.
- (f) Isosceles triangle \_\_\_\_\_.
- (g) Angles in a quadrilateral \_\_\_\_\_.

Vertically opposite angles

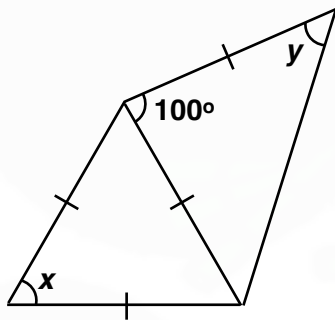


### Notes

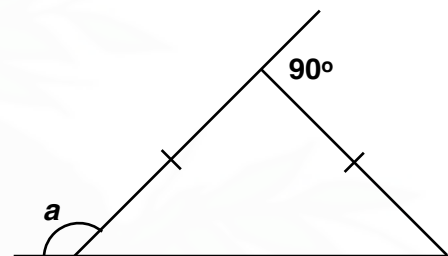
When finding angles, it may be necessary to calculate angles that are not marked.

**E.g. 1** Calculate the values of the marked angles:

(a)



(b)



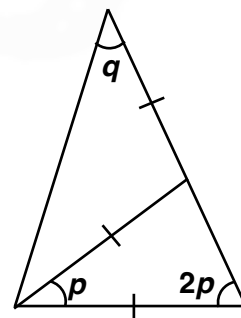
**Working:**

(a) Angle  $x$  is an equilateral triangle so  $x = 60^\circ$

Angle  $y$  is in an isosceles triangle so  $y = \frac{180^\circ - 100^\circ}{2} = 40^\circ$

Some questions may required you to set up and solve a linear equation.

**E.g. 2** Calculate the values of  $p$  and  $q$ .



Video: [Angles in a triangle](#)

[Solutions to Starter and E.g.s](#)

**Exercise**

9-1 class textbook: p62 M3.1 Qu 1-24 odd Draw all diagrams  
A\*-G class textbook: p55 M3.1 Qu 1-24 odd Draw all diagrams.  
9-1 homework book: p19 M3.1 Qu 1-10 Draw all diagrams  
A\*-G homework book: p14 M3.1 Qu 1-10 Draw all diagrams

**Summary**

When finding angles, it may be necessary to calculate angles that are not marked.  
Some questions may required you to set up and solve a linear equation.

