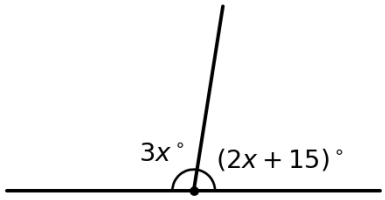
Angles 1 · Angles at a point, on a straight line and vertically opposite

Exam-Style Questions · Total: 20 marks · Suggested time: 25 minutes

Name: _____ Class: _____ Date: _____

Answer all questions. Show all your working. Give reasons where asked. Diagrams marked NOT TO SCALE must not be measured. The number of marks is given in brackets [ ].

1 The diagram shows two angles on a straight line.



NOT TO SCALE

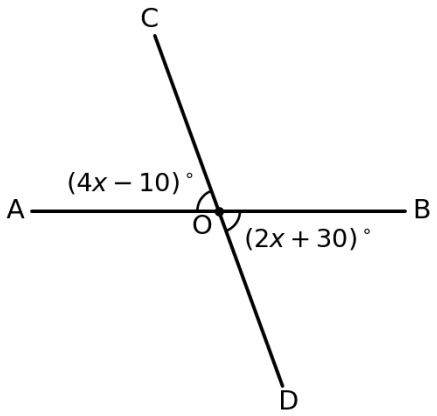
(a) Find the value of x.

x = ... [2]

(b) Find the size of the larger angle.

..... [1]

2 AB and CD are straight lines that intersect at O.



NOT TO SCALE

(a) Give a geometrical reason why $4x - 10 = 2x + 30$.

..... [1]

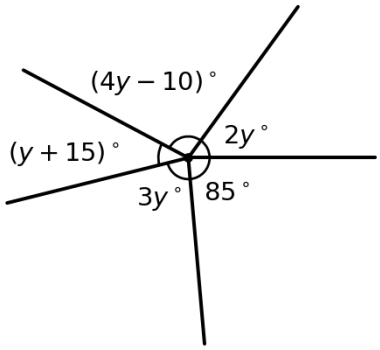
(b) Find the value of x.

x = ... [2]

(c) Find angle BOC.

Angle BOC = ... [2]

3 The diagram shows five angles at a point.



NOT TO SCALE

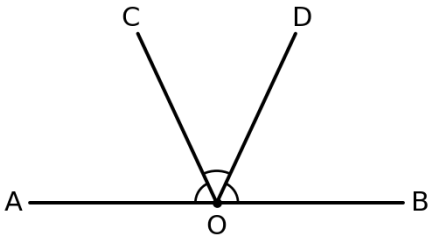
(a) Find the value of y.

y = ... [3]

(b) Find the size of the largest angle.

..... [1]

4 AOB is a straight line.
Angle AOC = $(x + 40)°$, angle COD = $2x°$ and angle DOB = $(3x – 10)°$.



NOT TO SCALE

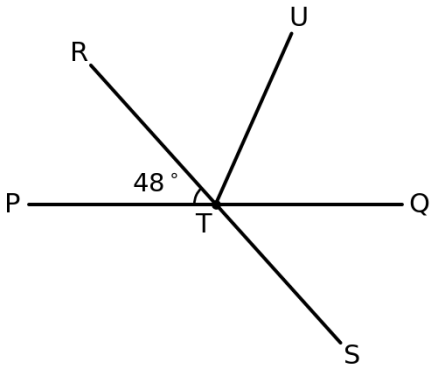
(a) Find the value of x.

x = ... [2]

(b) Show that angle AOC = angle DOB.

[2]

5 PQ and RS are straight lines that intersect at T.
Angle PTR = 48° and TU bisects angle RTQ.



NOT TO SCALE

(a) Find angle RTQ.

Angle RTQ = ... [1]

(b) Find angle UTQ.

Angle UTQ = ... [1]

(c) Find angle UTS.

Angle UTS = ... [2]