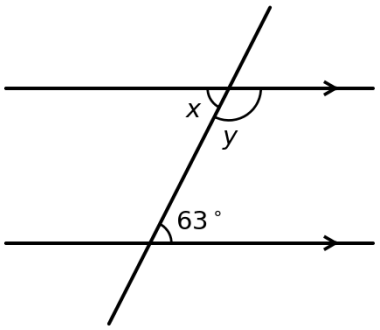
Angles 2 · Angles and parallel lines

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 parallel lines crossed by a straight line.



NOT TO SCALE

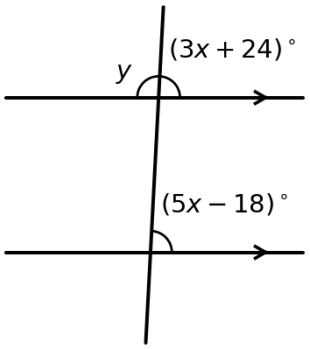
(a) Find the value of x. Give a reason for your answer.

x = ... [2]

(b) Find the value of y. Give a reason for your answer.

y = ... [2]

2 The diagram shows two parallel lines crossed by a straight line.



NOT TO SCALE

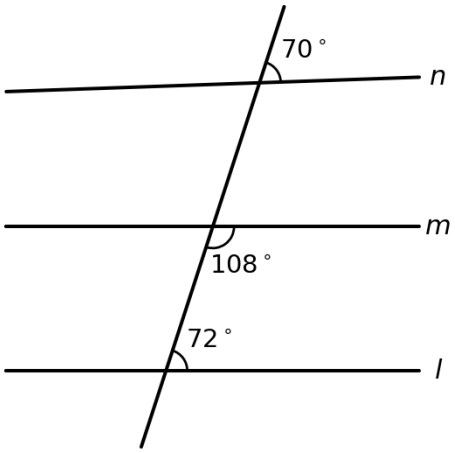
(a) Find the value of x.

x = ... [2]

(b) Find the value of y.

y = ... [2]

3 The lines l, m and n are crossed by a straight line.



NOT TO SCALE

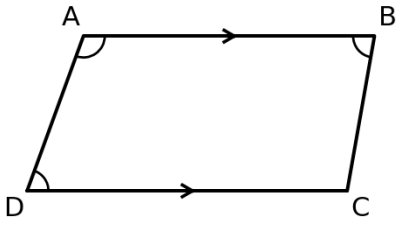
(a) Show that lines l and m are parallel.

[2]

(b) Explain why line n is not parallel to line l.

[1]

4 ABCD is a trapezium with AB parallel to DC.
Angle DAB = $(2x + 10)°$, angle ADC = $(x + 20)°$ and angle ABC = $(x + 30)°$.



NOT TO SCALE

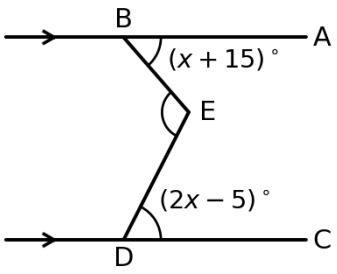
(a) Find the value of x.

x = ... [2]

(b) Find angle BCD.

Angle BCD = ... [2]

5 AB is parallel to DC.
Angle ABE = $(x + 15)°$ and angle EDC = $(2x – 5)°$.



NOT TO SCALE

(a) Show that angle BED = $(3x + 10)°$. Give reasons for your working.

[3]

(b) Angle BED = 112°. Find the value of x.

x = ... [1]

(c) Find angle EDC.

Angle EDC = ... [1]