Name and surname:
Group: S10
Date: 28-01-2021

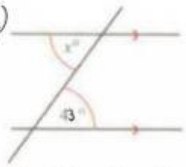
Total marks: /57

1) Study the triangle. (3)

(2) a Explain why $x + y = 90°$.
(1) b Find y if $x = 39°$. → $y =$

2) (3)
a What is the sum of exterior angles of a convex polygon with 15 sides? (1)
b What is the size of each exterior angle in this polygon? (1)
c If the polygon is regular, what is the size of each interior angle? (1)

3) (3)
a (1)

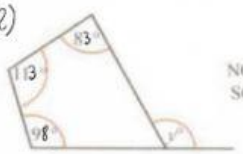


NOT TO SCALE

$X =$

Find the value of x.

b (2)



NOT TO SCALE

$y =$

Find the value of y.

4) The number of aircraft movements in and out of five main London airports during April 2017 is summarised in the table. (35)

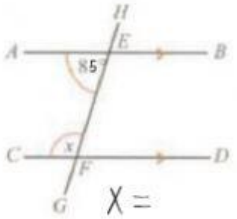
Airport	Gatwick	Heathrow	London City	Luton	Stansted
Total flights	23696	39660	6380	10697	15397

a Which airport handled most aircraft movement? (0.5)
b How many aircraft moved in and out of Stansted Airport? (0.5)
c Round each figure to the nearest thousand. (0.5 point each)

(0.5) Gatwick
(0.5) Heathrow
(0.5) London City
(0.5) Luton
(0.5) Stansted

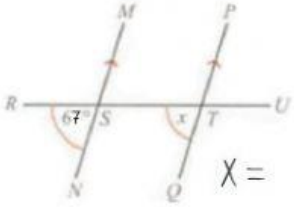
5) Find x in each figure. Give reasons. (6 points, 1 each)

a



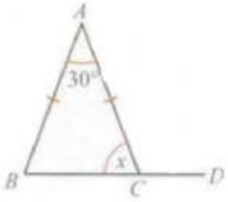
X =

b



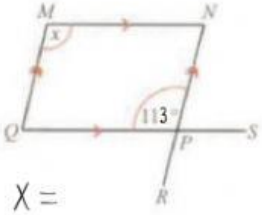
X =

c



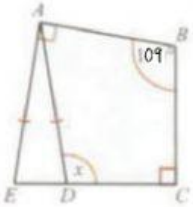
X =

d



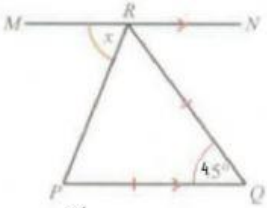
X =

e



X =

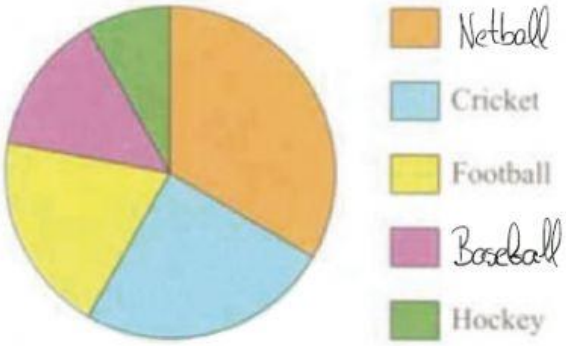
f



X =

6) Study this pie chart and answer the questions that follow. (4 points, 1 each)

Sport played by students



The data was collected from a sample of 200 students.

(1) **a** What data does this graph show?

(0.5) **b** How many different categories of data are there?

(0.5) **c** Which was the most popular sport?

(1) **d** What fraction of the students play cricket? ___

7) 93 800 students took an examination.
(3) 19% received grade A.
24% received grade B.
31% received grade C.
10% received grade D.
11% received grade E.
The rest received grade U.

(1) **a** What percentage of the students received grade U?
(1) **b** What fraction of the students received grade B? Give your answer in its lowest terms.
(1) **c** How many students received grade A?

8) Calculate $\frac{5}{6}\left(\frac{1}{4}+\frac{1}{8}\right)$ giving your answer as a fraction in its lowest terms.
(2)

Answer = —

9) During one summer there were 27 500 cases of *Salmonella* poisoning in Britain. The next summer there was an
(1) increase of 9% in the number of cases. Calculate how many cases there were in the second year.

Total cases:

10) Abdul's height was 160 cm on his 15th birthday. It was 172 cm on his 16th birthday. What was the percentage increase
(1) in his height?

% increase:

11) Calculate 17.5% of 44 kg.
(1.5)

12) Increase 52 by: (5)

(1) **a** 10% (1) **b** 15% (1) **c** 25% (1) **d** 5% (1) **e** 4%

13) Increase 315 by: (7)

(1) **a** 50% (1) **b** 84% (1.5) **c** 13.6% (1.5) **d** 112% (2) **e** $\frac{1}{2}$%

14) Decrease 241 by: (5)

(1) **a** 10% (1) **b** 15% (1) **c** 30% (1) **d** 4% (1) **e** 7%

15) Decrease 373 by: (9)

(1) **a** 90% (2) **b** 35.4% (2) **c** 0.3% (2) **d** 103% (2) **e** $\frac{1}{2}$%