



Aberdare Community School
Mathematics Department

WJEC GCSE
Foundation – Non Calculator
Data

Pie charts

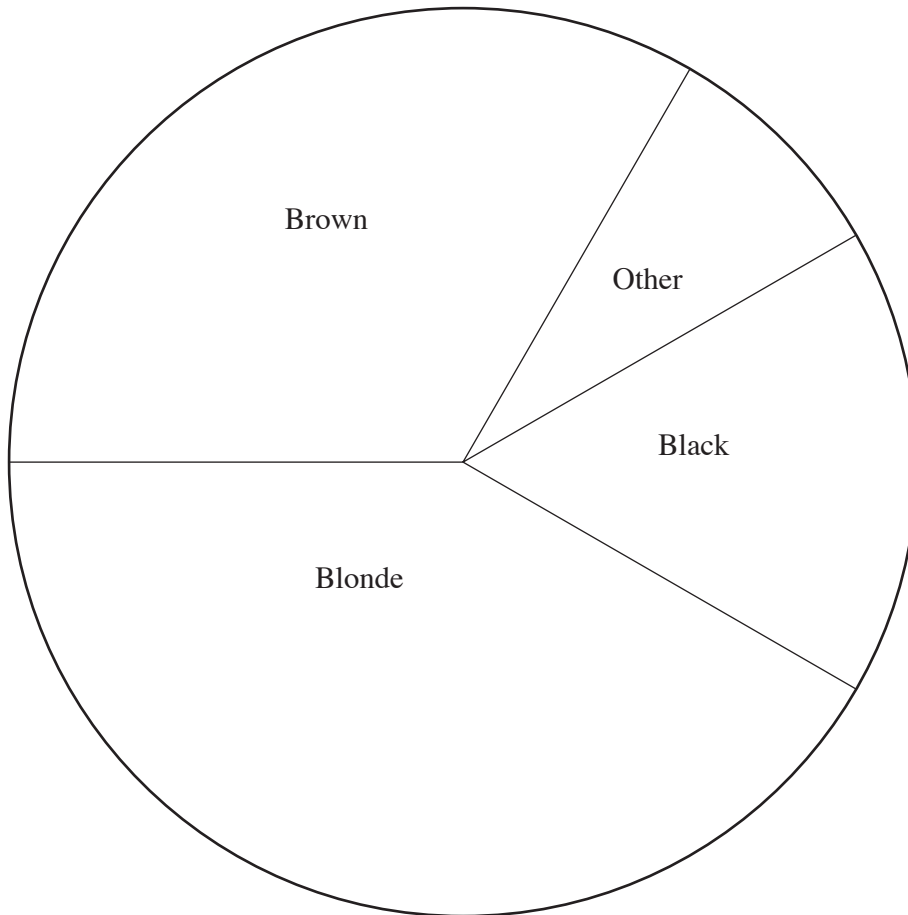
Name:

Set:

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8. A survey of the hair colour of 96 pupils in Year 8 was carried out. The pie chart below shows the results of this survey.



- (a) What fraction of the pupils in Year 8 had **black hair**?

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[2]

- (b) How many pupils in Year 8 had **brown hair**?

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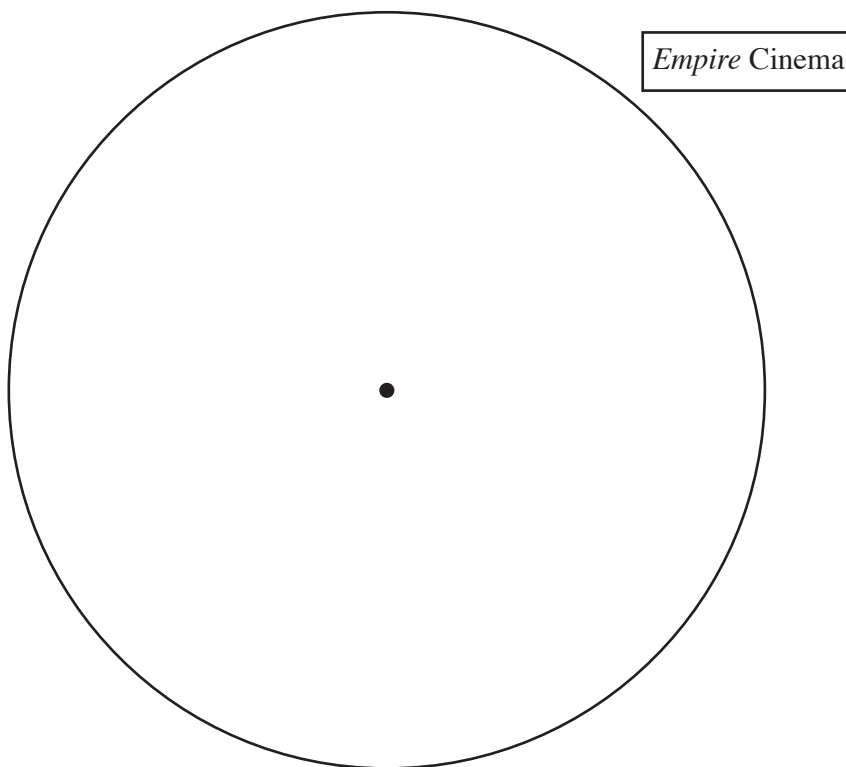
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[2]

15. (a) The table shows the various classification of films and the number of each type of film shown by the *Empire* cinema in 2007.

Classification	'PG'	'12'	'15'	'18'
Number of films shown	35	30	60	55

Draw a pie chart to illustrate this data. You should show how you calculate the angles of your pie chart.



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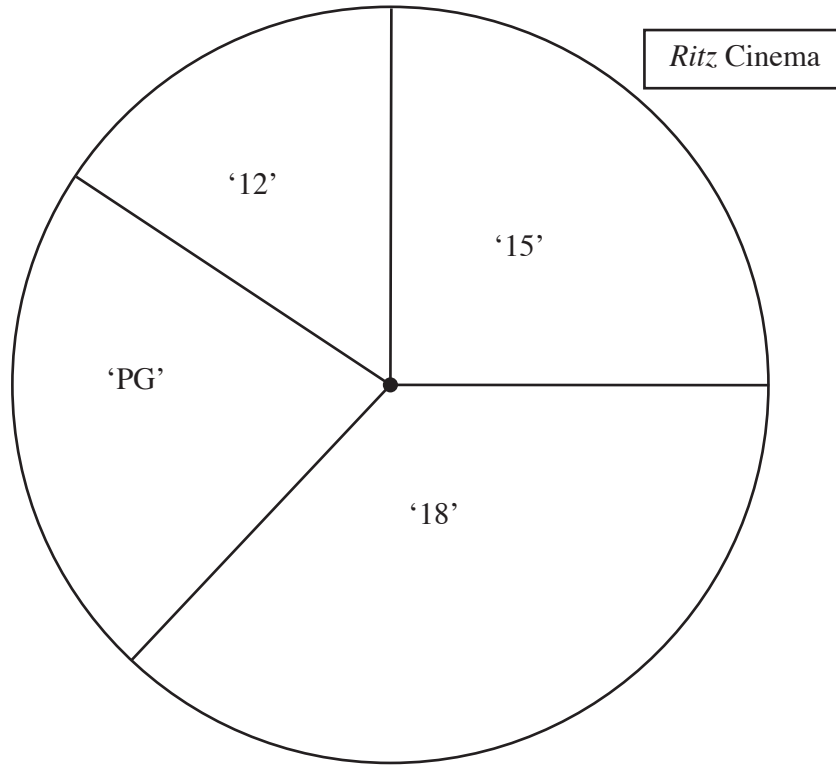
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(b) The following pie-chart shows similar information for the *Ritz* cinema during the same period.



(i) Robert claims that the pie-charts illustrate that the *Empire* cinema shows more films classified as '15' than the *Ritz* does. State whether Robert is correct or incorrect. Give a reason for your answer.

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[2]

(ii) Orla claims that the probability that a randomly chosen film having a '15' classification is higher in the *Ritz* cinema than in the *Empire* cinema. State whether Orla is correct or incorrect. Give a reason for your answer.

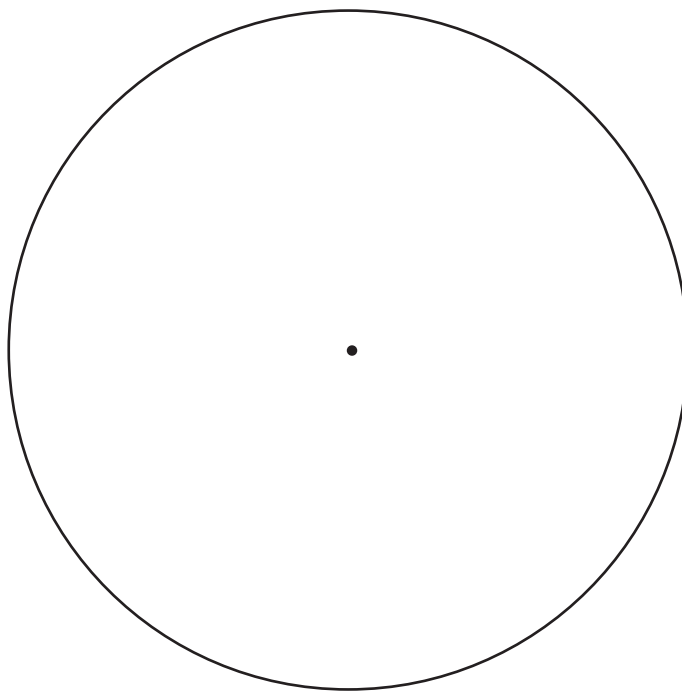
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[2]

13. (a) John carried out a survey in his school to find the numbers of pupils living in houses with 2, 3, 4, or more than 4 bedrooms. The results of his survey are shown in the following table.

Number of bedrooms	Number of pupils
2	25
3	35
4	20
More than 4 bedrooms	10

Draw a pie chart to illustrate these results. You should show how you calculate the angles of your pie chart.



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[4]

- (b) The probability of a boy, chosen at random, in Sian's class having blue eyes is 0.2. Sian says "The probability of a boy in my class not having blue eyes is 0.9". Explain why Sian is wrong.

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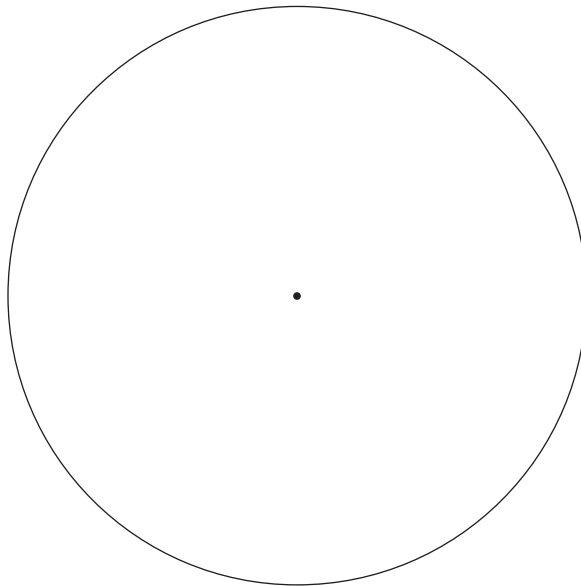
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[1]

12. The type of mobile phone owned by each of 60 pupils was recorded. The results are summarised in the table below.

Type of mobile phone	Number of pupils
A	25
B	16
C	10
Other	9

Draw a pie chart to illustrate these results.
Show your working.



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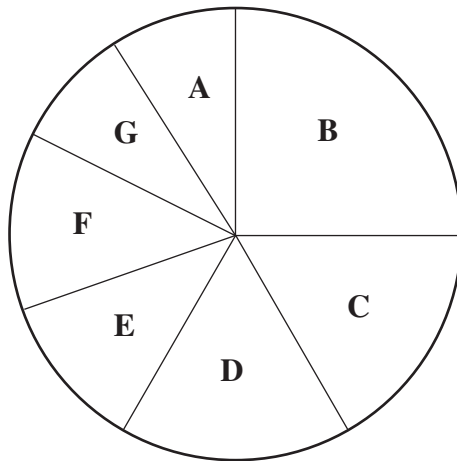
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[4]

Turn over.

5.

(b)



The pie chart shows the distribution of GCSE grades in mathematics obtained by the Year 11 pupils at Abercwm Comprehensive School.

(i) What **fraction** of the pupils gained grade B?

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(ii) There are 240 pupils in Year 11.
How many pupils gained grade C or grade D?

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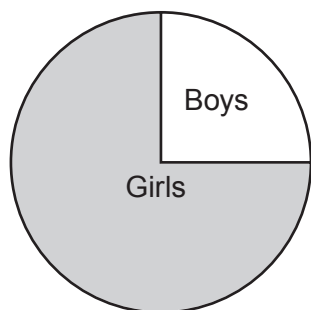
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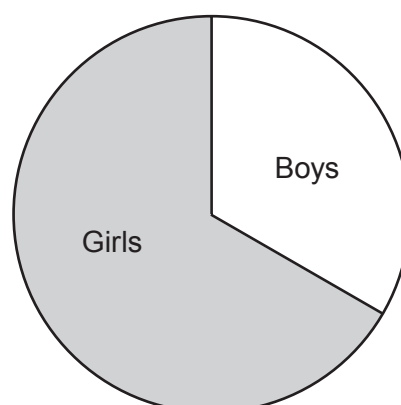
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[4]

17. The pie charts show the proportion of boys to girls in class A and class B.



Class A



Class B

There are more pupils in class B than in class A.

There are 4 boys in class A.

There are $1\frac{1}{2}$ times as many girls in class B than in class A.

How many boys are there in class B?

[4]

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