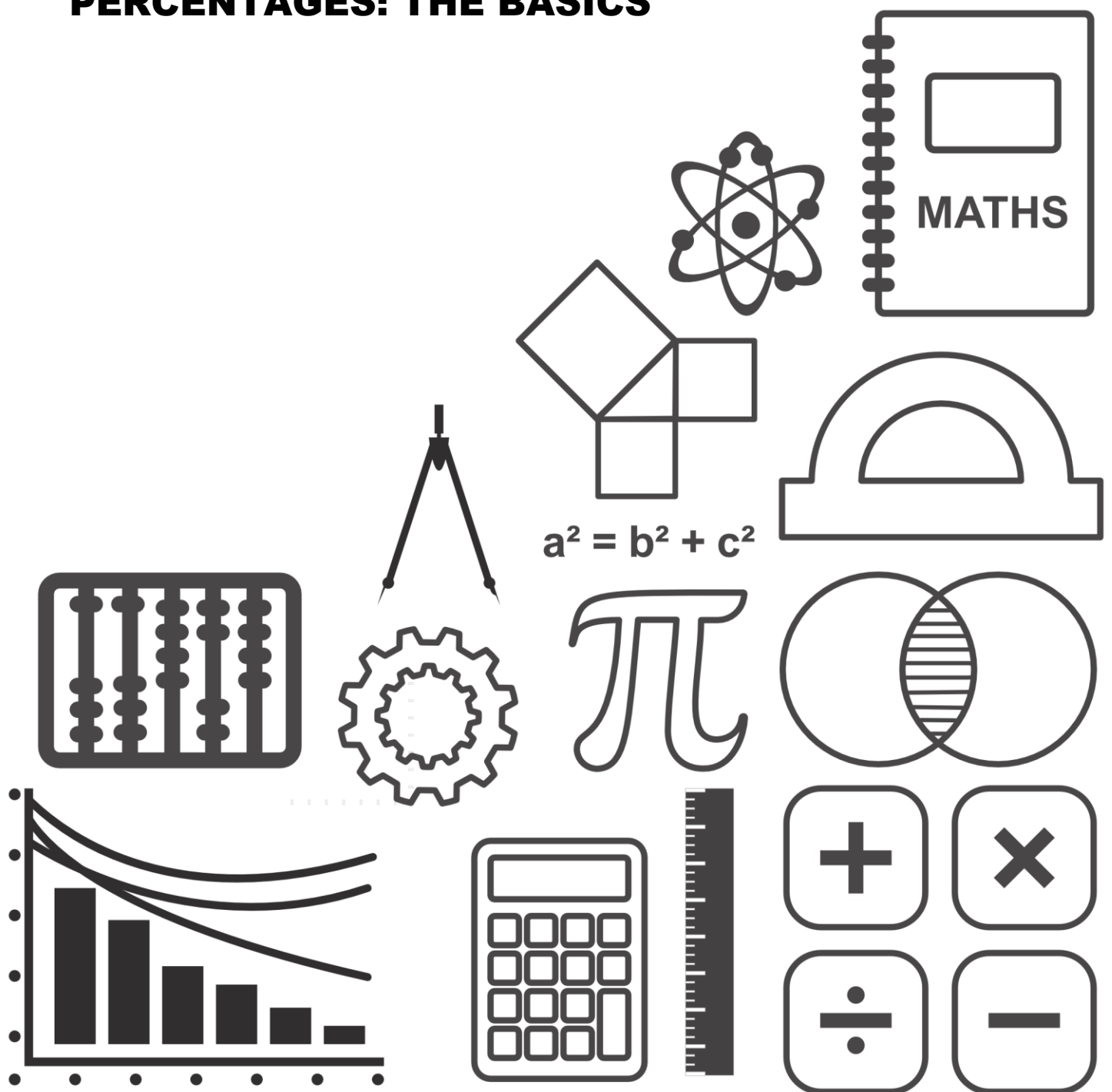


GCSE TOPIC BOOKLET PERCENTAGES: THE BASICS



[4]

(This area is intentionally left blank for student work.)

2.

[5]

[illegible]

What percentage of all the students who are chosen to attend the camp are from Russia? [5]

[illegible]

4.

(a) Gwen would be happy to make a 35% loss.
How much money would Gwen receive if she made a 35% loss in selling her computer? [2]

[illegible][illegible]

Janet is currently on a salary of £24 000 per year.

[illegible]

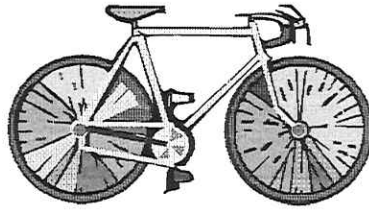
6.

You must show all your working.

[illegible]

Page 4 of 14

Daniel wants to buy a new bicycle. It is priced at £480.



Daniel can either

- pay £480 immediately, or
- pay a 15% deposit, followed by 24 monthly payments of £22.

(a) Calculate the total amount Daniel would pay using the deposit and monthly payments method. [3]
You must show all your working.

[illegible]

(b) Find the percentage increase in the cost of the bicycle when Daniel pays using the deposit and monthly payments method. [3]

[illegible]

8.

The table below shows some comparative data for 3 different European airlines.



	European Airlines		
	FreeFlight	Best2Fly	GoJet
Percentage of flights arriving on time, based on 30 000 flights	85%	88%	92%
Number of complaints, per 1000 passengers	0.62	0.68	0.78
Number of lost suitcases, per 1000 passengers	0.36	0.24	0.42

Use the information given in the table to answer the following questions.

- (a) FreeFlight, Best2Fly and GoJet all claim to be the best of these 3 airlines. Complete the following statements.

[2]

'FreeFlight are the best of these 3 airlines because

'Best2Fly are the best of these 3 airlines because

'GoJet are the best of these 3 airlines because

(b) How many of the 30 000 flights with Best2Fly were late?

[2]

(c) FreeFlight and GoJet both expect to carry 500 000 passengers next month.
How many more suitcases would you expect GoJet to lose than FreeFlight next month?

[3]

(d) Write down an estimate for the probability that a flight with GoJet does not arrive on time.
Express your answer as a percentage.

[1]

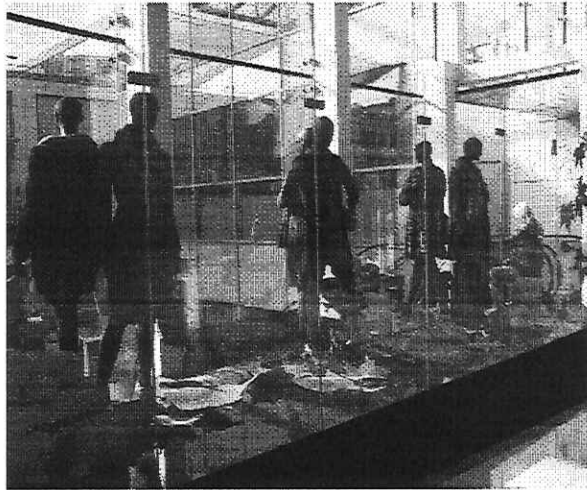
9.

Use the following clues to find the missing **whole** number.

- The number is between 80 and 100.
- The number is less than $\frac{1}{3}$ of 282.
- The number is greater than 20% of 450.
- The number is not odd.

[4]

The missing whole number is



Sale prices at P & A's Outlet Store are 40% below original prices.
On Saturdays an additional discount of 20% **off the sale price** is given.

- (a) If Lorraine shops at P & A's Outlet Store on a Tuesday and buys a coat that was originally priced at £140, how much discount will she get?

.....

.....

.....

Discount = £

[2]

- (b) Lorraine is advised by her friend to wait until Saturday to purchase the coat.
How much will Lorraine pay for the coat on Saturday?

.....

.....

.....

.....

.....

[4]

You will be assessed on the quality of your written communication in this question.

Arwyn needs four new tyres fitted on his car and would also like a new spare tyre. He sees two deals advertised at the garage.

"Economy Tyres"
£64 each

No matter how many
tyres fitted,
total fitting charge
£20

"Top Class Tyres"
Made to last longer!
£95 each

10% discount if you buy 4 or more tyres

Free fitting

Arwyn has exactly enough money to buy four 'Top Class Tyres' and to have them fitted.
Does he have enough money to buy, and have fitted, four 'Economy Tyres' with a fifth tyre as a spare?

You must show all your working.

[7]

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Harley has saved £210 towards the cost of buying a laptop computer.
She earns £140 per week from a part-time job.
Harley can only afford to save 12% of the amount she earns each week.
She sees an advertisement, shown below, for the laptop computer she wants to buy.



Only for the next 6 weeks ...

15% off the marked price!

Remember this offer is only valid for the next 6 weeks.

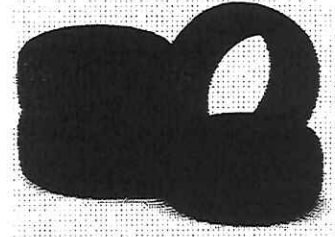
Will Harley be able to buy the laptop computer at the reduced price? You must show all your working and give a reason for your answer.

[illegible]

[6]

Brand of tyre	Cost per tyre 	Expected lifetime of the tyre, in miles
<i>Fudget</i>	£82	20 000
<i>Gripwell</i>	£140	30 000

20% off *Gripwell* when buying 4 tyres



You must show all your working.

[8]

[illegible]

You will be assessed on the quality of your written communication in this question.

Gwilym bought a camera for £150.

When he sold the camera, he made a loss of 6%.

For how much did Gwilym sell the camera?

[5]

[illegible]

15.

The ruling body for international football has rules for the dimensions of rectangular football pitches.

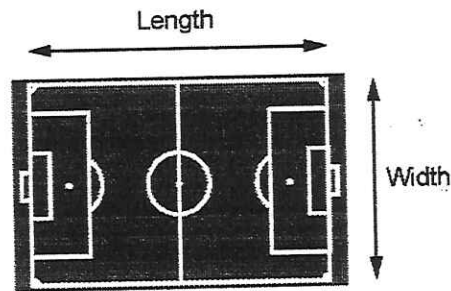


Diagram not drawn to scale

Football pitch dimension rules:

- the minimum width is 45m
- the maximum width allowed is double the minimum width
- the maximum length is 120m
- the minimum length allowed is three-quarters of the maximum length

Susan says

'The maximum area of a pitch is at least 50% greater than the minimum area of a pitch.'

Is Susan correct?

Is Susan correct?
You must show all your working to justify your answer.

[4]

[illegible]

You will be assessed on the quality of your written communication in this question.

When Liam has a bath he uses 150 litres of water.

His sister Tina claims that when she has a shower she uses 40% less water than Liam uses when he has a bath.

To test this claim, Tina made the following two observations.

- 1 litre of water comes out of the shower head every 10 seconds
- Tina spends 15 minutes in the shower.

Is Tina's claim correct?

You must show all your working.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's part of a bound notebook. There is no handwriting or other markings on the page.

[8]

At the end of the eight months, she will give $\frac{1}{3}$ of the amount she has saved to her younger brother.

[illegible]