### 1.4 Homework

GCSE (Year 10) Mathematics
Percentages II
You may use a calculator

## Question 1

Fill in the gaps in the following table;

| Vulgar <br> Fraction |  | $\frac{1}{3}$ |  |  | $\frac{1}{10}$ |  |  | $\frac{1}{50}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Decimal <br> Fraction | 0.5 |  |  | 0.2 |  |  | 0.04 |  |  |
| Percentage <br> $\%$ |  |  | 25 |  |  | 5 |  |  | 1 |

## Question 2

Convert the following vulgar fractions into exact percentages;
(i) $\frac{3}{10}$
(ii) $\frac{7}{20}$
( iii) $\frac{12}{25}$
(iv) $\frac{130}{50}$
(v) $\frac{17}{1000}$
(vi) $\frac{8.6}{16}$

## Question 3

Convert the following percentages into vulgar fractions;
Give your answers in as simple a form as possible.
(i) $60 \%$
(ii) $32 \%$
(iii) $85 \%$
(iv) $214 \%$
(v) $\frac{1}{2} \%$
( vi ) $0.2 \%$

## Question 4

(i) What exact percentage of $£ 52$ is $£ 13$ ?
( ii ) What exact percentage of $\$ 120$ is $\$ 40$ ?
( iii ) What exact percentage of 15 kg is 2.5 kg ?
(iv) What exact percentage of $£ 80$ is 10 p ?
(v) What exact percentage of a foot is an inch ? ( $\mathbf{1 2}$ inches $=\mathbf{1}$ foot )

## Question 5

What percentage of the letters in this sentence are vowels?

## Question 6

In a test with 40 questions, William gets 32 correct and Kate gets 14 wrong. How many percent higher is William's score, than Kate's?

## Question 7

On average I spell $95 \%$ of words correctly.
How many spelling mistakes am I likely to make in a 2500 word essay?

Question 8
What percentage of the large square is shaded?
(i)

( ii )

( iii)


## Question 9

(i) What percentage of a square's area will be contained within the inscribed circle, as shown below ?
Show your working, making your method clear

( ii ) What percentage of a circle's area will be contained within the inscribed square, as shown below?
Show your working, making your method clear


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