# THE <br> <br> DUSTMN <br> <br> DUSTMN satroot satroot <br> Knowledge Organiser Maths <br> <br> Year 11 Term 2 <br> <br> Year 11 Term 2 <br> <br> Additional Maths 

 <br> <br> Additional Maths}


Additional Online Homework:

| Platform | Due: |
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Log-in details:

## 5 Mathswatch

Website: https://vle.mathswatch.co.uk/vle/ Username: (firstname)(lastname)@dustonschool Password: berrywood

## - methodmaths

Website: https://www.methodmaths.com/login.html Centre ID: duston
Username: (firstname)(lastname)
Password: berrywood


 66 Sketching Functions. . . . . . . . . . . . . . . Subject of a Formula Using Flowcharts Generate a Sequence from $n$th Term
 Special Sequences. Exchanging Money. Sharing Using Ratio Ratios, Fractions and Graphs. . . . . . Increase/Decrease by a Percentage Percentage Change . . . . . . . . . . . .

 Metric Conversions. Problems on Coordinate Axes Surface Area of a Prism Volume of a Cuboid. Circle Definitions. Area of a Circle. Circumference of a Circle Volume of a Prism....... Angles and Parallel Lines Angles in a Triangle

 Bearings

Experimental Probabilities $\vdots$
$\vdots$
0
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2
2
2
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Venn Diagrams. Representing Data swejbe!a joneos




## Homework 1-Calculator

1 Write down a multiple of 6 that is between 40 and 50
(Total for Question 2 is 1 mark)

2 Work out the cube root of 64
(Total for Question 3 is 1 mark)

3 Work out the value of $3^{5}$

460 students were asked how they get to school.
The table shows the results.

|  | Bus | Walk | Car | Bicycle |
| :--- | :---: | :---: | :---: | :---: |
| Number of students | 15 | 27 | 12 | 6 |

What fraction of the 60 students did not walk to school?

8 Solve $\frac{y}{4}=3$

(Total for Question 12 is 1 mark)

## $9 \quad$ Solve $\quad 2 f+7=18$

$f=$
(Total for Question 14 is 1 mark )
10 Simplify $m^{3} \times m^{4}$
tal for Question 20 is 1 mark)

11 Write 1.59 correct to 1 decimal place.

12 Each worker in a factory is either left-handed or right-handed.
22 of the 45 workers are male.
16 of the 34 right-handed workers are female.
Complete the frequency tree for this information.

(Total for Question 7 is 3 marks)

13 Change 35 cm to mm .
m

1. Write down a 6 digit number that has 4 as its thousands digit. You can only use the digit 4 once.

## (Total for Question 16 is 1 mark)

2 Write $\frac{4}{50}$ as a percentage.
.................................................... $\%$
(Total for Question 26 is $\mathbf{1}$ mark)
$3 \quad\left(7^{2}\right)^{y}=7^{10}$
Find the value of $y$.
$y=$

The diagram shows two shapes drawn on a centimetre grid.

(a) Write down the mathematical name of quadrilateral $\mathbf{Q}$.
(b) Find the area of shape $\mathbf{P}$.
$7 \quad p^{3} \times p^{x}=p^{9}$
Find the value of $x$.
(Total for Question 34 is 1 mark)

## 8 Ken buys some fruit.

He buys apples, bananas, peaches and oranges.
Ken buys
4 apples weighing 125 g each
2 bananas weighing 170 g each
3 peaches weighing 135 g each
Each orange has a weight of 90 g .
The fruit has a total weight of 1.785 kg .
Work out how many oranges Ken buys.

9 Write down all the prime numbers between 20 and 30.

## (Total for Question 35 is 2 marks)

10200 people live in a village.
23 people do not have a garden.
10 males do not have a garden.
95 people are male.
(a) Use this information to complete the frequency tree.


One of the people who does not have a garden is chosen at random.
(b) Write down the probability that this person is female.
(3)

## Homework 3 - Calculator

1. Write the number 2538 correct to the nearest hundred.
(Total for Question 11 is $\mathbf{1 ~ m a r k}$ )
2. Simplify $y+3 y-2 y$
(Total for Question 10 is 1 mark)
3. The film starts at 6.45 p.m.

The film lasts 102 minutes.
What time does the film finish?
(Total for Question 13 is 2 marks)
4. Write 0.3 as a percentage.
(Total for Question 16 is 1 mark )
5. Rehan is asked to find the range of the numbers

Here is his working

$$
\text { Range }=5-3=2
$$

This is wrong.
Explain why.
$\qquad$
8. Write down all the factors of 18 .
(Total for Question 24 is $\mathbf{2}$ marks)
9. 2.5 kg of apples cost $£ 3.60$.

Work out the cost of 3.5 kg of apples.
$\qquad$
(Total for Question 28 is $\mathbf{2}$ marks)
10. Factorise $4 m+12$
(Total for Question 29 is 1 mark )
11. Expand and simplify $5(p+3)$
12. Last year the cost of a season ticket for a football club was $£ 560$

This year the cost of a season ticket for the club has been increased to $£ 600$
Write down the increase in the cost of a season ticket as a fraction of last year's cost.
13.


## $B C D$ is a straight line.

$A B C$ is a triangle.
Show that triangle $A B C$ is an isosceles triangle.
Give a reason for each stage of your working.

