



Getting Ahead – Summer Work

#BrockFreshers

Electrical Installations Level 2 & 3 Diplomas

Welcome to Brockenhurst College

We look forward to meeting you in September and we want to make sure that you have made the right choice regarding your course. This activity will provide you with an opportunity to look deeper into the role of an Electrician and the skills required. This task will enable you to develop your research skills. Listed below are web sites that you may find useful.

Web Sites

<https://www.niceic.com/find-a-contractor/electrics-explained>

<https://electrical.theiet.org>

<https://www.electricalcareers.co.uk>

<https://mntb.org.uk/about-us/careers-at-sea>

<https://www.goconstruct.org/construction-careers/what-jobs-are-right-for-me/electrician/>

<https://www.apprenticeships.gov.uk/apprentice/find-an-apprenticeship>



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NAME:

GROUP:

DATE:

DEI Maths Questions

Sheet 1

Show All Workings For All Questions If Appropriate

- 1) A room measures 8m x 5m. Calculate the area of the room in m^2 .

- 2) The height of the room is 3m. Calculate the volume of the room in m^3 .

- 3) The radius of a circle is 5m. Calculate the area in m^2 .

- 4) What is the circumference of the above circle in m?

- 5) The diameter of a piece of copper wire is 6mm. Calculate the surface area of the end of the wire in mm^2 .

- 6) If the length of the above wire is 5m (5000mm), what would be the volume of copper in mm^3 ?

- 7) How many cm in 1m?

- 8) How many mm in 1m?



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- 9) Convert 70cm into mm.
- 10) Convert 70cm into m.
- 11) Convert 0.65m into cm.
- 12) Convert 0.65m into mm.
- 13) How many cm^2 in 1m^2 ?
- 14) How many mm^2 in 1m^2 ?
- 15) Convert 5500cm^2 into m^2 .
- 16) Convert 550000mm^2 into m^2 .
- 17) If $V = I \times R$ transpose the formula to find:
 - a) $I =$
 - b) $R =$
- 18) If $P = I \times V$ transpose the formula to find:
 - a) $I =$
 - b) $V =$
- 19) If $A = \pi \times r^2$ transpose the formula to find:
 - a) $r^2 =$



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b) $r =$

c) π

20) If $C = 2\pi r$ transpose the formula to find:

a) $2 =$

b) $\pi =$

c) $r =$

21) The formula for Pythagoras is:

$$A^2 = B^2 + C^2$$

Transpose the formula to find:

a) A^2

b) B^2

c) C^2

d) A

e) B

f) C



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- 22) A right angled triangle has sides of 5cm (side A) and 10cm (side B). Using Pythagoras calculate the length of the hypotenuse (H).
- 23) What is 25% of £200?
- 24) What is 0.35 of 300?
- 25) If a set of electricians' screwdrivers is £24 including VAT (@ 20%) what is the cost of the screwdrivers excluding VAT?
- 26) What is $\frac{3}{5}$ of £60?
- 27) What is $\frac{3}{5}$ plus $\frac{3}{10}$?

We do hope you enjoy undertaking this research and we look forward to hearing back from you during induction week in September.

We wish you a very happy summer.