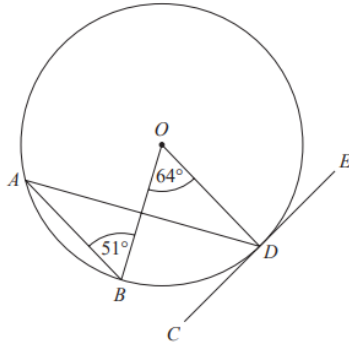


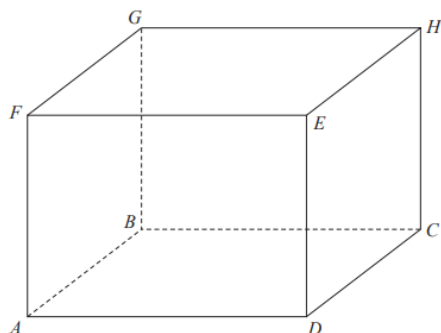
Edexcel GCSE Mathematics Non-Calculator 2022 Higher Paper 1 Revision Worksheet

1. Make x the subject of the formula $y = \frac{4(x-7)}{5x+3}$
2. 7 kg of carrots and 5 kg of tomatoes cost a total of 480p
The cost of 1 kg of carrots : cost of 1 kg of tomatoes = 5 : 9.
Work out the cost of 1 kg of carrots and the cost of 1 kg of tomatoes.
3. The menu in a restaurant has starters, main courses and desserts. There are 5 starters. There are 12 main courses. There are x desserts. There are 420 different ways to choose one starter, one main course and one dessert. **Work out the value of x .**
4. For $x \geq 0$, the functions f and g are such that $f(x) = 3x + 4$, $g(x) = \frac{\sqrt{x}+2}{5}$
 - (a) Find $g^{-1}(x)$
 - (b) Solve $g(f(x)) = 3$
5. A, B and D are points on a circle with centre O . CDE is the tangent to the circle at D . $\angle OAB = 51^\circ$, $\angle OBA = 64^\circ$.



Work out the size of angle ADC . Write down any circle theorems you use.

6. $ABCDEFGH$ is a cuboid. $AF = 6.8$ cm, $FC = 13.6$ cm. Work out the size of the angle between FC and the plane $ABCD$.



7. Write $\frac{3\sqrt{3}}{4-\sqrt{3}} - \frac{2}{\sqrt{3}}$ in the form $\frac{a\sqrt{3}+b}{c}$ where a , b and c are integers.
8. Find the set of possible values of x for which $4x^2 - 25 < 0$ and $12 - 5x - 3x^2 > 0$. You must show all your working.
9. (a) Write $\frac{1}{16}$ in the form 4^n where n is an integer.
- (b) Work out the value of $8^{5/3} - 9^{1/2}$
10. The equation of line L_1 is $y = 2x - 5$. The equation of line L_2 is $6y + kx - 12 = 0$. L_1 is perpendicular to L_2 . Find the value of k . You must show all your working.