

Work Sheet Mathematics Grade 10 (unit 4&5) In 2015 E.C

I. Work out

1. Find the distance between the point A (1,-5) and (7,-3)
2. Find the equation of the line which passes through the points P (-4,-2) and Q (3,6)
3. Let A (-6, 2) and B (-1, 3) are two opposite vertices of a square. Find the area of square.
4. Let ℓ be the line through A(-4,5) and B(3,t) that is perpendicular to the line through P(1,3) and Q(-4,2) . Find the value of t.
5. Prove that the condition for line $AX + BY + C = 0$ and $ax + by + c = 0$ to be perpendicular may be written in the form $Aa + Bb = 0$ where $B, b \neq 0$
6. Find the equations of the line containing the diagonals of the parallelogram with vertices A (-4, 3), B (-3,-2), C (6, 1) and D (5, 6). Are these lines perpendicular?
7. Given lines ℓ_1 ; $(1-a)x - y = 1$ and ℓ_2 ; $6x + ay = 9$, find the values of a so that A/ $\ell_1 \parallel \ell_2$
B/ $\ell_1 \perp \ell_2$
8. If $\sin 38 = \cos 2\theta$, then $\theta =$ -----
9. If $\frac{\sin \theta}{\cos 55^\circ} = 1$, then $\theta =$ -----
10. What is the values of $\csc(\frac{11\pi}{2})$ and $\sec(\frac{11\pi}{2}) =$ -----
11. If $\sin \theta = -\frac{1}{2}$ and $\tan \theta = -\frac{\sqrt{3}}{3}$, then the degree measure of θ is-----
12. Let $\csc \theta = \frac{\sqrt{5}}{2}$ and $\cot \theta < 0$, then find the values of the other five trigonometric function of θ .
(Hint: us Pythagorean identity)
13. Let θ be an angle such that $\cos(90 - \theta) = a$ and $\sin(90 - \theta) = b$. Then find i/ $\tan \theta$
ii/ $\cot \theta$
14. If $\tan \alpha = \frac{3}{4}$, find $\frac{\sin \alpha \sec \alpha}{\cot \alpha}$
15. Show that $\frac{\tan^2 \theta}{\csc^2 \theta} = \tan^2 \theta$ (Hint; us Pythagorean and quotient Identity)
16. Find the values of $\csc 693$.(using trigonometric table)
17. Let θ be an obtuse angle with $\cos \theta = \frac{-4}{5}$.Then find a/ $\sin \theta$ b/ $\tan \theta$

