

Worksheet: Lines and Angles

NIOS · Class 9 · Mathematics · 15 questions · 36 marks

Name: _____

Date: _____

Score: _____ / 36

Q1. Find the complement and supplement of 32° . [1 mark]

Q2. Classify 115° as acute, right, obtuse or reflex. [1 mark]

Q3. If AOB and BOC form a linear pair and $\text{AOB} = 75^\circ$, find BOC. [1 mark]

Q4. Two intersecting lines make an angle of 50° . Find all four angles formed. [1 mark]

Q5. If two angles forming a linear pair are in the ratio 2 : 3, find both. [2 marks]

Q6. Two parallel lines are cut by a transversal. An alternate interior angle is 72° . Find the corresponding co-interior angle. [2 marks]

Q7. Two parallel lines are cut by a transversal. One of the angles formed is 65° . Find all eight angles. [3 marks]

Q8. ℓ_1 and ℓ_2 are cut by a transversal. Corresponding angles are $(3x + 10)^\circ$ and $(5x - 30)^\circ$. Find x . [3 marks]

Q9. Two angles of a triangle are 53° and 78° . Find the third. [2 marks]

Q10. If the three angles of a triangle are equal, find each. [2 marks]

Q11. An exterior angle of a triangle is 105° . One interior opposite angle is 45° . Find the other. [3 marks]

Q12. In $\triangle ABC$, $A = (3x - 5)^\circ$, $B = (4x + 10)^\circ$, $C = (2x + 30)^\circ$. Find x and each angle. [3 marks]

Q13. In a figure, ℓ_1 and ℓ_2 are parallel lines and a transversal makes $\angle 1 = (2x + 30)^\circ$ at ℓ_1 and $\angle 2 = (3x - 20)^\circ$ at ℓ_2 , where $\angle 1$ and $\angle 2$ are alternate interior angles. Find x and $\angle 1$. [4 marks]

Q14. Find the sum of interior angles of a heptagon (7-sided polygon). [4 marks]

Q15. Lines l and m are parallel. Point P lies between them. PA hits l making angle 40° with l ; PB hits m making angle 50° with m . Find $\angle APB$. [4 marks]
