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 AOB = 75°, 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 ℓ and m are cut by a transversal. One of the angles formed is 65°. Find all eight angles. *[3 marks]*

Q8. ∥ are cut by a transversal. Corresponding angles are (3x + 10)° and (5x − 30)°. 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 △ABC, A = (3x − 5)°, B = (4x + 10)°, C = (2x + 30)°. Find x and each angle. *[3 marks]*

Q13. In a figure, ∥, and a transversal makes ∠1 = (2x + 30)° at and ∠2 = (3x − 20)° at m, where ∠1 and ∠2 are alternate interior angles. Find x and ∠1. *[4 marks]*

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

Q15. Lines ℓ ∥ m. Point P lies between them. PA hits ℓ making angle 40° with ℓ; PB hits m making angle 50° with m. Find ∠APB. *[4 marks]*