INDIAN SCHOOL NIZWA - WORKSHEET

MATHEMATICS

6. LINES AND ANGLES

Name: _____ Date:_____ Class: IX Sec: ___

1. What is the measure of an angle that is 24° more than its complement?
(a) 66° (b) 57° (c) 156° (d) 114°

2. Two angles are supplementary if their sum is:
(a) 90° (b) 180° (c) 360° (d) 270°

3. If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 2:3, find the larger angle.
(a) 72° (b) 108° (c) 54° (d) 36°

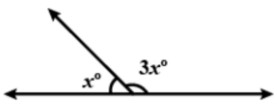
4. If a ray stands on a line, then the sum of two adjacent angles formed is:
(a) 30° (b) 60° (c) 90° (d) 180°

5. Aditya was given a riddle by Pragya who stated that an angle is 24° less than its complementary angle. The angle's measure is:
(a) 36° (b) 33° (c) 66° (d) 57°

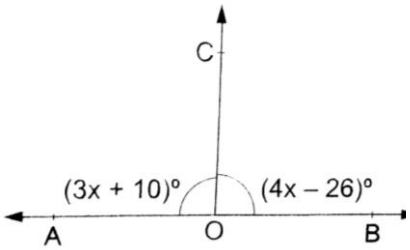
6. In the following question a statement of assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.
Assertion (A): Two adjacent angles always form a linear pair.
Reason (R): In a linear pair of angles, two non-common arms are opposite rays.

7. Assertion (A): If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 5 : 4, then the greater of the two angles is 1000 . Reason (R): If a transversal intersects two parallel lines, then the sum of the interior angles on the same side of the transversal is 1800 . Ans: (a) Both A and R are true and R is the correct explanation of A.

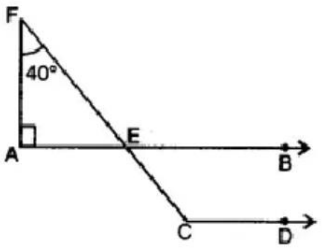
8. In the given figure, magnitude of angles are_____.
a) 40° , 120° b) 30° , 90° c) 45° , 135° d) 50° , 60°



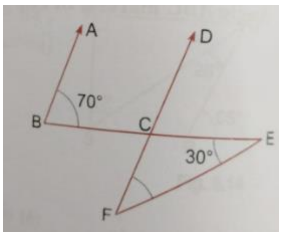
9. In the given figure, AOB is a straight line.
If $\angle AOC=(3x+10)^0$ and $\angle BOC=(4x-26)^0$, then find $\angle BOC$.



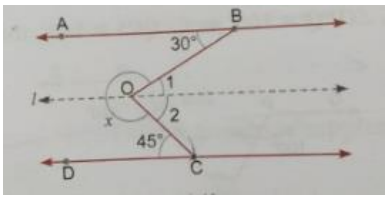
10. In the given figure, AB ∥ CD, ∟FAE= 90^0, ∟AFE=40^0, find ∟ECD.



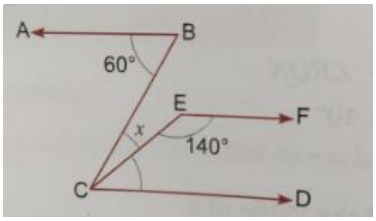
11. In the given figure if AB ∥ CD , then ∟EFD=_____.



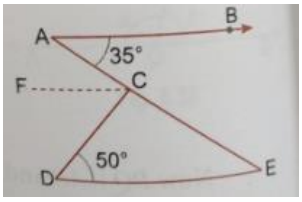
12. In the given figure, if AB ∥ CD, find x.



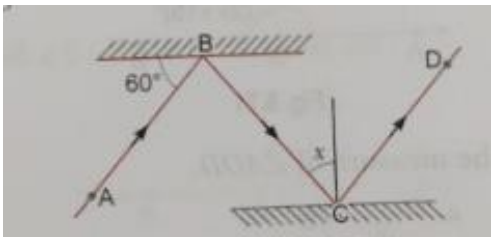
13. In the given figure, if AB ∥ CD ∥ EF. Find x.



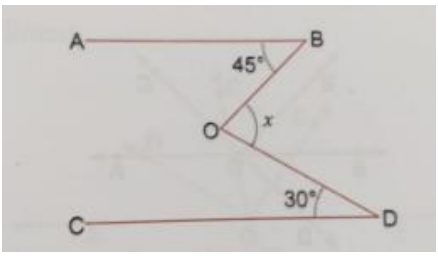
14. In the given figure, if AB ∥ DE , ∟BAC=35^0 and ∟CDE=50^0, find ∟DCE.



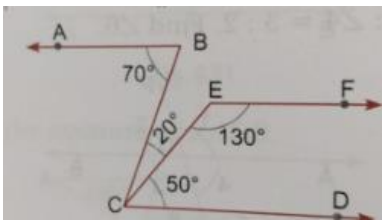
15. In the given figure, If AB and CD are two mirrors placed parallel to each other, then find x.



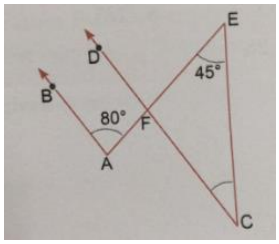
16. In the given figure, if AB ∥ CD, Find the value of x.



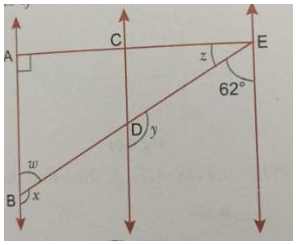
17. In the given figure, prove that AB ∥ CD and CD ∥ EF.



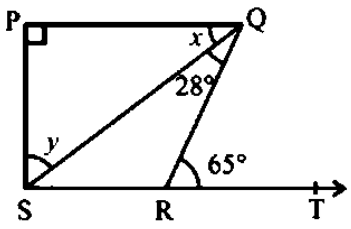
18. In the given figure, AB ∥ CD. Find the value of ∟FCE.



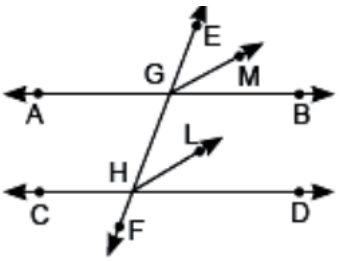
19. In the given figure, AB ∥ CD and CD∥ EF. Also EA ⊥AB. If ∟BEF=62^0, find the values of w,x,y,z.



20. In the given figure, if PQ ⊥ PS, PQ ∥ SR, ∟SQR=28^0 and ∟QRT=65^0, then find the values of x and y.

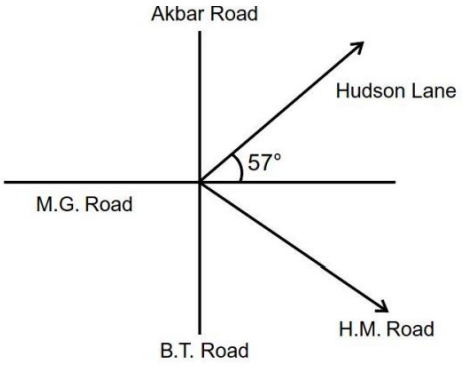


21. In the given figure, EF is the transversal to two parallel lines AB and CD. GM and HL are the bisectors of the corresponding angles EGB and EHD. Prove that GM || HL.



22. Ritesh and Sheetal are cousins and both went to visit Mughal Garden. Before going, they searched the

location of their destination on a map. During searching, they found on map that Prepared by: M. S. KumarSwamy, TGT(Maths) Page - 8 - Akbar Road and M.G. road form a right angle at their intersection point and Hudson lane form 57° angle with M.G. road.



(a) What is the measure of acute angle between Akbar Road and Hudson lane? [1]

(b) If Ritesh is standing on M.G Road in the west direction and Sheetal is on H.M road, what is the shortest angle they can cover in order to meet? [2]

(c) Find the measure of reflex angle formed between M.G Road [in east direction] with Hudson lane. [1]

Basics-

1. Identify the mistake and correct it

$$-2(8m + 8) = -16$$
$$-16m + 16 = -16$$

2. Identify themistake and correct it

$$5(1 + 4h) + 2h = 27$$
$$5 + 20h + 2h = 27$$

3. $6.72 \div 1.2 =$_____

4. $20 - 2^3 + 6 \div 3 =$_____

5. Find $\sqrt{17.64}$

6. Find $\sqrt[3]{0.027}$