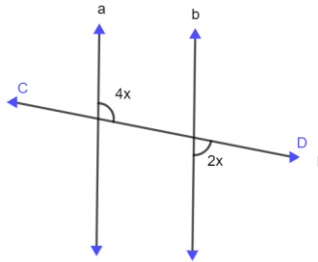# STANDARD 8TH: CHAPTER 2
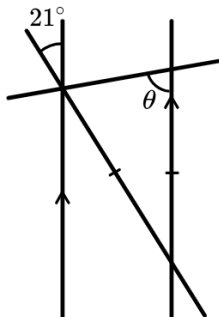
Parallel lines & transversal

Q1. Choose all the correct alternatives

1. In the following figure, if *line a ∥ line b* and line l is transversal then find x.

   a) 90^0
   b) 60^0
   c) 30^0
   d) 180^0

2. Calculate the angle θ

   a) 79^0
   b) 80^0
   c) 90^0
   d) 79.5^0

3. State true or False if false write the correct statement:
   "If two parallel lines are cut by transversal, then a pair of alternate interior angle is supplementary"
   a) True
   b) False
   (Ans: False, If two parallel lines are cut by transversal, then a pair of alternate interior angle is equal)

4. Adjacent angles have a common _____ and a common_____
   a) Vertex, Arm
   b) Angle, Point
   c) Point, Side
   d) Ray, Arm

5. Two angles forming linear pair are_____.
   a) equal
   b) complementary
   c) supplementary
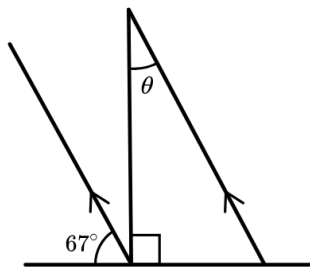   d) Corresponding

6. Calculate x if line $L_1 \parallel L_2$
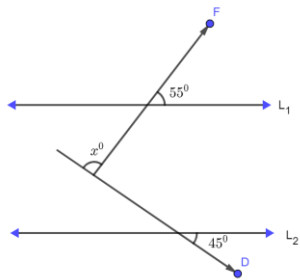
   a) 90^0
   b) 70^0
   c) 80^0
   d) 100^0

7. State true or False if false write the correct statement give one example if true
   "One acute angle and one obtuse angle can be transformed into linear pair"
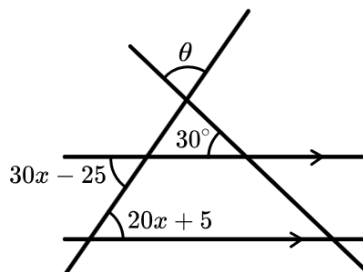   a) True
   b) False

8. Find the value of x
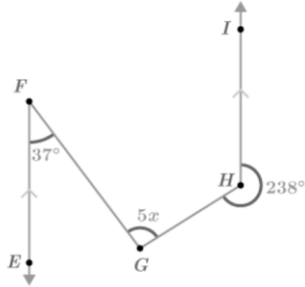
   a) 29
   b) 20
   c) 19
   d) 30

9. Find the value of θ

   a) 23^0
   b) 25^0
   c) 27^0
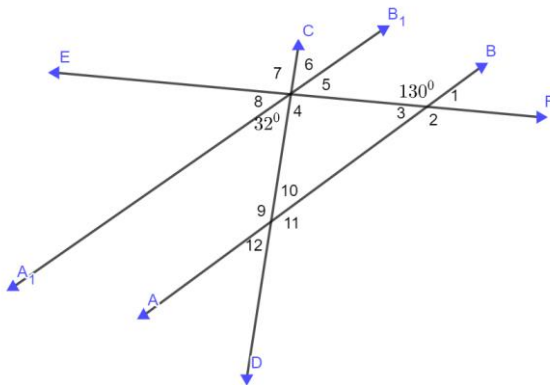   d) 21^0

10. By calculating the value of x, find the value of θ

   a) 83^0
   b) 81^0
   c) 80^0
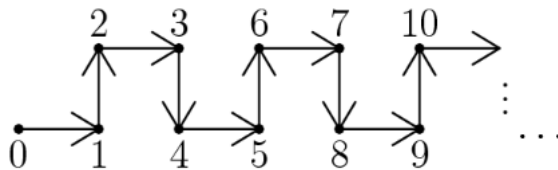   d) 85^0

Q2. Solve the following questions.

1. Lines AB and CD are parallel.
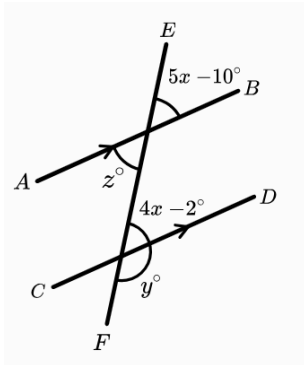
2. Find the missing angles ($\angle 1, \angle 2, \angle 3, \angle 4, \angle 5, \angle 6, \angle 7, \angle 8, \angle 9, \angle 10, \angle 11, \angle 12$) in the picture:
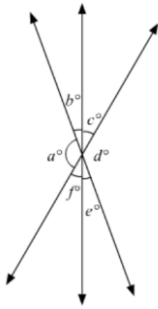

3. If this path is to continue in the same pattern, then which sequence of arrows goes from point 425 to point 427?
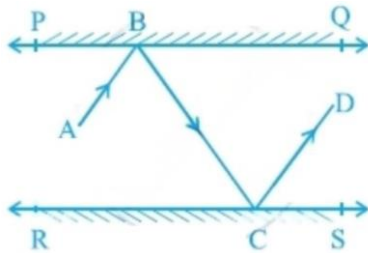

a)
b)
c)
d)
e)

4. In the given figure, which of the following statements must be true? Justify Ans:


a) $a + b = d + c$
b) $a + c + e = 180^0$
c) $b + f = c + e$

5. In the given figure PQ and RS are two mirrors placed parallel to each other. An incident ray AB strikes the mirror PQ at B, the reflected ray moves along the path BC and strikes the mirror RS at C and again reflects back along CD. Prove that AB || CD.
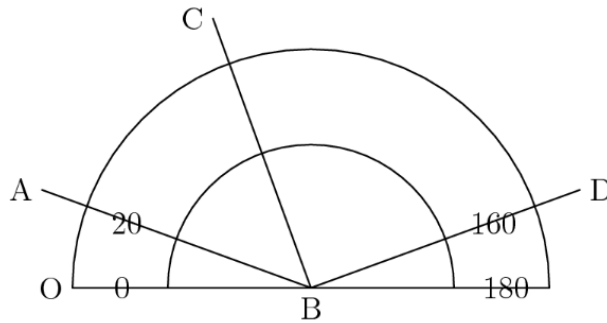

6. In the figure side QR of $\Delta\ PQR$ is introduce to a point S. If the bisectors of $\angle PQR$ and $\angle PRS$ meet at point T, then prove that $\angle QTR = \frac{1}{2} \angle QPR$.
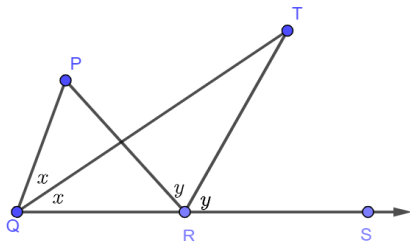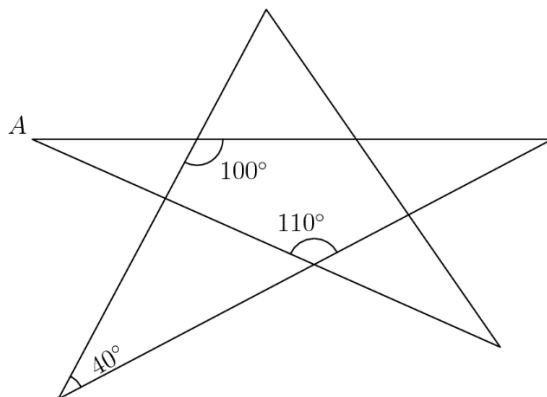
7. In the given figure if $PQ \perp PS$ and $PQ \parallel SR$, $\angle SQR = 28^0$ and $\angle QRT = 65^0$
   Then find the values of x and y.
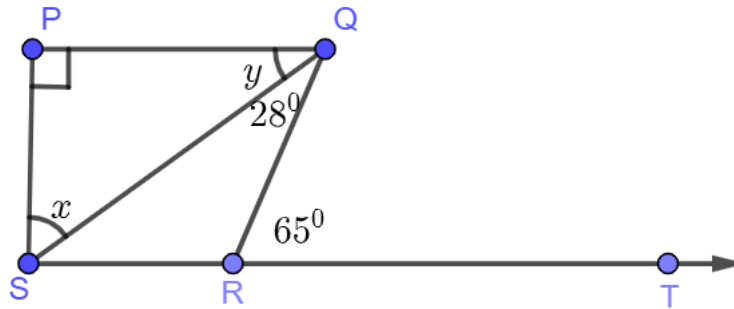
8. If $\angle CBD$ is a right, then this protractor indicates that the measure
   of $\angle ABC$ is approximately equal to _____?

9. The degree measure of angle A is_____?

10. Prove that if two lines are parallel then the alternate angles formed by a
    transversal are equal.