## JSUNIL TUTORIAL

## Punjabi colony gali no. 01

Class IX
Lines and angles
Date $\qquad$

Q1. Define and the following terms: (i) Angle (ii) Obtuse angle (iii) Complementary angles (iv)
Supplementary angles (v) Adjacent angles
Q2. Define and draw the following: (i) Linear pair of angles (ii) Vertically opposite angles
Q3. Find the complement of the following angles: (i) 58 (ii) 45
Q4. Find the supplement of the following angles: (i) 90 (ii) 120
Q5. Two supplementary angles are in the ratio $3: 2$. Find the angles.
Q6. In the given figure, lines $A B, C D$ and $E F$ intersect at $O$. Find the measures of $<A O C$ and $<$ COF.


Q7. In the given figure PQ and MN intersect at O (i) Determine y when $\mathrm{x}=60$ (ii) Determine x when $y=40$


Q8. In the given figure, what value of $x$ will make $A O B$, a straight line?


Q9. One of the four angles formed by two intersecting lines is a right angle. Show that the other three angles will also be right angles.
Q11. Prove that the two lines which are both parallel to the same line are parallel to one another.
Q13. In the figure, $A B \| C D$ and $<F=30$ Find $<E C D$.


Q14. In the given figure, if $a: b$ are in 3:2and $A B$ II $C D$, find $a$.


Q15. Two parallel lines are cut by a transversal such that one of the interior angles is 57 . Find each of the interior angles.
Q16. In the given figure, AB\∥CDand BC\∥ED. Find the value of $x$.


Q17. In the given figure, $P Q$ II $R S$, find the value of $x$.


Q18. In the given figure, prove that $B F \| D E$.


Q19. The sides $B C ; C A$ and $B A$ of a triangle $A B C$ have been produced to $D, E$ and $F$ respectively. If $<A C D=105$ and, $E A F=45$. Find all the angles of triangle $A B C$.


Q20. In \▵ $P Q R,<P:<Q:<R=3: 2: 1$ and $P R I I R D$. Find the measure of $<E R D$.


