

**Bangalore Mathematical Institute**  
**Faculty of Mathematics**

**IIT Foundation Weekly – QUIZ #6**  
**Faculty:G Ekaveera Kumar**

Topic:Coordinate geometry, logs and tpzm

2020/11/03

Name: Ajay \_\_\_\_\_

Student Number: Class 9 \_\_\_\_\_

---

1. In the figure below  $ABCD$  is a trapezium with  $AB \parallel DC \parallel EF$ . If  $E$  is the mid point of  $AD$ , then prove that  $F$  is mid point of  $BC$ .



2. If  $\log_{36}(8) = A$ , then find  $\log_{36}(9)$  in terms of  $A$  and the final answer should not contain any logarithms.
3. If  $A(x, -1)$ ,  $B(2, 1)$ ,  $C(0, 3)$  and  $D(-2, 1)$  are vertices of a square. Find the value of  $x$ .