Ethio-Parents' School

2019/20 Second Semester Mathematics Worksheet One for Grade 6

Topic- Ratio and Proportion

Part I - Identify whether the given relation is directly proportional (DP) or inversely proportional (IP)

1. The speed of a car and the time it takes to cover a fixed distance.
2. The length of a rectangle with a constant area and its width.
3. The distance covered by a car moving with a constant speed and the time it takes.
4. The number of children in a family and the share of their fathers' fortune.
5. The time taken to finish a piece of work and the number of people doing the work.
6. The number of pencils a student can buy and its price.

Part II – Determine whether the following equations represent direct proportion or inverse proportion

1. XY = 12
2. Y = 20/X
3. Y/X = 4
4. X/Y = 1
5. X/4 = 5/Y

Part III – Solve the following word problems involving proportionality

1. A 5 meter cloth costs Birr 20. What is the price of a 6 meter cloth?
2. If Alemayehu can bicycle 25 km in 2hrs, then how far can he bicycle in 5 hrs?
3. 9 men can do a piece of work in 2 days. How long will it take 6 men to do the same work?
4. A train travelling at a speed of 40 km per hrs will take 9hrs to cover the distance between two cities. How long will it take a car travelling at 30 km per hrs to cover the same distance?

Part IV- The following problems are based on coordinate geometry. Identify the axis or the coordinate in which each point is located.

1. **(2, 5)**
2. **(-3, -7)**
3. **(0, 25)**
4. **(6, 0)**
5. **(-7, 4)**
6. **(8, -3)**

Part V – Write TRUE if the statement is true or write FALSE if the statement is false.

1. **The point (3, 1) satisfies the equation Y= 2X – 5**
2. **The point (-2, 1) satisfies the equation Y= X + 3**

Part VI – Solve the following equations

1. **X + 3 = 12**
2. **X – 7 = 13**
3. **3x = 24**
4. **x/ 7 = 6**
5. **10/3 X = 20**
6. **X + ¼ = 3/5**
7. **X + ½ = 2**
8. **2X = 1/3**
9. **¾ X = 12**

Part VII – Solve the following inequalities in the given domain. (List the elements of the solution set)

1. **X+ 4 < 7 , X ε W**
2. **Y – 3 > - 5 , X ε N**
3. **2/3 Y < 4 , X ε W**

4. 1/6 X < 3/ 4 , X ε W
5. ¾ X > 3, X ε { 1,2,2,…..20}

Part VIII – Write an inequality for each situation

1. There are at least 20 people (P) in the waiting room.
2. No more than 150 students (S) can occupy the room.