Time I hour 15 min	cbsemath.com	MM 40

Similar Triangles Paper 2

1. State and prove Pythagoras Theorem. Using it prove $AB^2+BC^2+CD^2+DA^2 = AC^2+BD^2$. given ABCD is rhombus. 6

2. State and prove basic proportionality theorem. Using its converse prove DE||AB given in ΔABC $\angle A = \angle B$ and AD=BE where D and E are points on CA and CB respectivaley. 6

3. In ΔABC $\angle A = 90^\circ$, AD is its bisector where D lies on BC. If $DE \perp AC$, where E lies on AC prove that $DE \times (AB+AC) = AB \times AC$. 6

4. Prove in a parallelogram sum of squares of sides is equal to the sum of squares of diagonals. 4

5. P is a point in the interior of rectangle ABCD. If PA = 3cm, PB = 4cm and PC = 5cm. Find PD. 6

6. In figure 1 Prove $DE^2 = FE \times DC$ and $FE^2 = AF \times DE$ 6

8. In figure 2 prove 2AL = CL, given ABCD is a parallelogram. 6

Figures

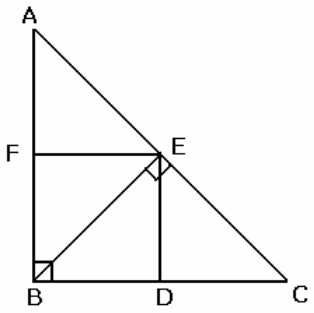

Figure 1

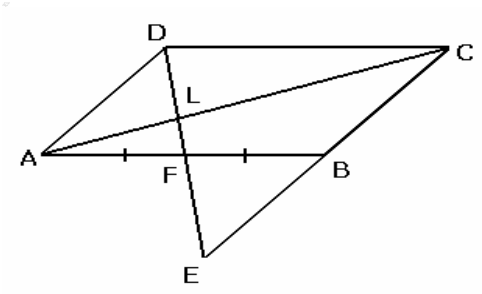

Figure 2