Decide which Definition, Postulate, or Theorem is being used in each step.

A B C D

1. B is between A and C,

AB + BC = AC

2. C is the midpoint of BD,

BC CD

3. BC CD,

BC = CD

2

1 3

4

4. ∠1 and ∠2 are a linear pair

∠1 is supplementary to ∠2

5. ∠1 is supplementary to ∠2

m∠1 + m∠2 = 180.

6. ∠1 and ∠2 are supplements

∠1 and ∠4 are supplements

∠2 ∠4

A 32 B C

70

7. B is between A and C

AC = AB + BC

8. AC = 70, AB = 32

70 = 32 + BC

9. BC = 38

Finish these proofs.

10. F G K L Given: G is between F and L, K is between G and L.

Prove: FL = FG + GK + KL

Statements Reasons

1. G is between F and K 1.

2. K is between G and L 2.

3. FL = FG + GL 3.

4. GL = GK + KL 4.

5. FL = FG + GK + KL 5.

A B

11. X Given: AX DX, XB XC

Prove: AC DB

D C

Statements Reasons

1. AX DX , 1.

2. AX = DX 2.

3. XB = XC 3.

4. AC = AX + XC 4.

5. AC = DX + XB 5.

6. DB = DX + XB 6.

7. AC = DB 7.

8. AC DB 8.

