1. In Fig. 1(i), if DE // BC, then EC = ?
   A. 1 cm
   B. 2 cm
   C. 2.5 cm
   D. 3 cm (B)

Explanation : By the Basic Proportionality Theorem, AD/DB = AE/EC. So, 1.5/3 = 1/EC, hence EC = 2 cm.

2. In Fig. 1(ii), if DE // BC, then AD = ?
   A. 2.4 cm
   B. 3.6 cm
   C. 4.8 cm
   D. 5.4 cm (A)

Explanation: Using AD/DB = AE/EC, we get AD/7.2 = 1.8/5.4 = 1/3. Therefore, AD = 2.4 cm.

3. In Question 2(i), is EF // QR?
   A. Yes
   B. No
   C. Cannot be determined
   D. Only if PQ = PR (B)

Explanation: PE/EQ = 3.9/3 = 1.3, but PF/FR = 3.6/2.4 = 1.5. Since the ratios are not equal, EF is not parallel to QR.

4. In Question 2(ii), is EF // QR?
   A. Yes
   B. No
   C. Only if triangle is isosceles
   D. Only if E and F are midpoints (A)

Explanation: PE/EQ = 4/4.5 = 8/9 and PF/FR = 8/9. Since the ratios are equal, EF // QR.

5. In Question 2(iii), is EF // QR?
   A. Yes
   B. No
   C. Only if PQ = PR
   D. Cannot be determined (A)

Explanation : PE/PQ = 0.18/1.28 and PF/PR = 0.36/2.56. Both are equal, so EF is parallel to QR.

6. If LM // CB and LN // CD, then which relation is correct?
   A. AM/AB = AN/AD
   B. AB/AM = AD/DN
   C. LM = LN
   D. AM = AN (A)

Explanation : Parallel lines divide the sides proportionally, so the required relation is AM/AB = AN/AD.

7. If DE // AC and DF / AE, then which result is correct?
   A. BF/BE = FE/EC
   B. BF/FE = BE/EC
   C. BE/BF = EC/FE
   D. BF/EC = BE/FE (B)

Explanation : This is the exact proportional result asked in Question 4 of the exercise.

8. If DE // OQ and DF // OR, then what can be shown?
   A. OP // QR B. EO//FR
   C. EF//QR D. DQ // PR (C)

Explanation : Using proportionality on the given parallel lines, we conclude that EF is parallel to QR.

9. The line joining the midpoints of any two sides of a triangle is always:
   A. Perpendicular to the third side
   B. Equal to the third side
   C. Parallel to the third side
   D. Greater than the third side (C)

Explanation : This is the Midpoint Theorem: the segment joining the midpoints of two sides is parallel to the third side.

10. If AO/BO = CO/DO in a quadrilateral ABCD, then ABCD is a:
    A. Square B. Rectangle
    C. Trapezium D. Rhombus (C)

Explanation : This condition proves that one pair of opposite sides is parallel, so ABCD is a trapezium.