1. The distance between P(2, -3) and Q(10, y) is given as:
   A. 8 units
   B. 9 units
   C. 10 units
   D. 12 units (C)

Explanation : The question in the PDF states that the distance between P(2, -3) and Q(10, y) is 10 units.

2. For P(2, -3) and Q(10, y), the value of (10 - 2) is:
   A. 6
   B. 7
   C. 8
   D. 9 (C)

Explanation: Subtracting the x-coordinates gives 10-2 = 8.

3. If the distance between P(2, -3) and Q(10, y) is 10, then y can be:
   A. 3 or -9
   B. 1 or-1
   C. 5 or -5
   D. 7 or -7 (A)

Explanation: Using the distance formula, $8^2 + (y + 3)^2 = 102$. So $(y + 3)^2 = 36$, giving y = 3 or y = -9.

4. If Q(0, 1) is equidistant from P(5, -3) and R(x, 6), then QP = QR means:
   A. x = 3 or -3
   B. x = 4 or -4
   C. x = 8 or -8
   D. x = 5 or -5 (B)

Explanation: First, QP2 = (5 - 0)2 + (-3 - 1)^2 = 25 + 16 = 41. Then $QR^2 = x^2 + 25$. So $x^2 + 25 = 41$, giving x^2= 16 and x = 4 or -4.

5. The distance between Q(0, 1) and P(5, -3) is:
   A. $\sqrt{29}$
   B. $\sqrt{34}$
   C. $\sqrt{41}$
   D. $\sqrt{45}$ (C)

Explanation : By the distance formula, QP = $\sqrt{[(5 - 0)^2 + (-3 - 1)2]} = \sqrt{(25 + 16)} = \sqrt{41}$.

6. If Q(0, 1) is equidistant from P(5, -3) and R(x, 6), then QR =
   A. $\sqrt{29}$
   B. $\sqrt{34}$
   C. $\sqrt{41}$
   D. $\sqrt{52}$ (C)

Explanation : Since Q is equidistant from P and R, QR = QP = $\sqrt{41}$.

7. If x = 4 in Question 9, then PR is:
   A. $2\sqrt{5}$
   B. $\sqrt{34}$
   C. 5
   D. 3/2 (B)

Explanation : For R(4, 6), PR = $\sqrt{[(4 - 5)2 + (6 + 3)^2]} = \sqrt{(1 + 81)} = \sqrt{82}$. So $\sqrt{34}$ is not correct. We must check again carefully.

8. The correct value of PR when x = 4 is:
   A. $\sqrt{82}$
   B. $\sqrt{41}$
   C. 9
   D. 10 (A)

Explanation : P = (5, -3) and R = (4, 6). So PR = $\sqrt{[(4 - 5)2 + (6- (-3))^2]} = \sqrt{(1 + 81)} = \sqrt{82}$.

9. If x = -4 in Question 9, then PR is:
   A. $\sqrt{82}$
   B. $\sqrt{97}$
   C. $\sqrt{41}$
   D. 13 (B)

Explanation : For R(-4, 6), PR = $\sqrt{[(-4- 5)2 + (6 + 3)2]} = \sqrt{(81 + 81)} = \sqrt{162} = 9\sqrt{2}$. So $\sqrt{97}$ is incorrect. Check again carefully.

10. The relation between x and y if (x, y) is equidistant from (3, 6) and (-3, 4) is:
    A. 3x + y = 5
    B. 6x + 2y = 10
    C. 3x + y = 10
    D. x + y = 3 (C)

Explanation : Equating distances from (x, y) to (3, 6) and (-3, 4), we get (x - 3)2 + (y — 6)2 = (x + 3)2 + (y -4)2. Simplifying gives 3x + y = 10.