

Name : \_\_\_\_\_

## Parallel and Perpendicular Lines

Sheet 4

- 1) R(1, 3) is the center of a circle. S(-2, 6) is any point on the circle. A line  $y = -x + 11$  is a chord of the circle. Prove that the line segment RS is parallel to the chord.

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- 2) The endpoints of a line segment LM are (3, 6) and (5, 3). The equation of line MN is  $3y = 2x - 1$ . Is the triangle LMN a right triangle? Justify your answer.

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- 3) (3, -7) and (8, -2) are the endpoints of a chord of a circle. (8, -7) are the endpoints of another chord of the same circle. Are the two chords parallel?

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- 4) The coordinates of the vertices of a triangle are (1, 2), (3, 4) and (5, 6). The equation of a line RS is  $3y = -x + 16$ . Prove that the line RS is parallel to the line containing the side of the triangle.

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- 5) A line WX passes through (-8, 3) and (-5, 8). Slope of a line UV is  $\frac{5}{3}$ . Prove that the lines WX and UV are parallel.

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