Name : _____

# Parallel and Perpendicular Lines

Sheet 3

1) Equation of a chord is $3y = 5x + 11$. Endpoints of another chord is (1, –6) and (4, –1). Prove that the chords are parallel.

2) A line PQ passes through (–8, –1) and (–2, 3). Equation of a line RS is $–2y = 3x + 13$. Is $\overleftrightarrow{PQ}$ parallel to $\overleftrightarrow{RS}$? Justify.

3) M(2, –7) is the cen ircle. A line $5y = –x – 7$ is a chord of the ci ndicular to the chord.

4) (–4, 2) and (5, 6) ar 3) are the endpoints of a chord UV. Are th ur answer.

5) A line EF passes through (2, 5) and (3, 11). Slope of a line GH is 6. Prove that the lines EF and GH are parallel.

Name : _____

**Answer Key**

Sheet 3

# Parallel and Perpendicular Lines

1) Equation of a chord is $3y = 5x + 11$. Endpoints of another chord is (1, –6) and (4, –1). Prove that the chords are parallel.

**slope of $3y = 5x + 11$ is $\frac{5}{3}$**

**slope of chord (1, –6) and (4, –1) is $\frac{5}{3}$**

**The chords are parallel.**

2) A line PQ passes through (–8, –1) and (–2, 3). Equation of a line RS is $-2y = 3x + 13$. Is $\overleftrightarrow{PQ}$ parallel to $\overleftrightarrow{RS}$? Justify.

**slope of $\overleftrightarrow{PQ}$ =**

**slope of $\overleftrightarrow{PQ} \neq$ s**

**No. As the slop** **l to the line RS.**

3) M(2, –7) is the cen ircle. A line $5y = -x - 7$ is a chord of the ci ndicular to the chord.

**slope of $\overline{MN}$ =**

**slope of $5y = -$**

**Product of the** **l is perpendicular to the chord.**

4) (–4, 2) and (5, 6) ar 3) are the endpoints of a chord UV. Are th ur answer.

**slope of $\overline{ST}$ =**

**slope of $\overline{ST}$ = s**

**As the slopes are equal, the chords are parallel.**

5) A line EF passes through (2, 5) and (3, 11). Slope of a line GH is 6. Prove that the lines EF and GH are parallel.

**slope of $\overleftrightarrow{EF} = 6$ ; slope of $\overleftrightarrow{GH} = 6$**

**slope of $\overleftrightarrow{EF}$ = slope of $\overleftrightarrow{GH}$**

**The lines EF and GH are parallel.**