

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

## Parallel and Perpendicular Lines

Sheet 2

- 1) Equation of two lines are  $y = -4x + 1$  and  $4y = x - 8$ . Are the lines parallel or perpendicular? Justify.

\_\_\_\_\_

- 2) Equation of a line  $u$  is  $y = -x + 2$ . Slope of a line  $v$  is  $-1$ . Prove that the lines are parallel.

# PREVIEW

- 3) Equation of a line  $w$  is  $y = \frac{2}{7}x + 5$ . Prove that the lines are perpendicular.

Gain complete access to the largest collection of worksheets in all subjects!

Members, please  
log in to  
download this  
worksheet.

Not a member?  
Please sign up to  
gain complete  
access.

- 4) Equation of  $\vec{PQ}$  is  $y = \frac{3}{4}x + 5$ . Prove that the lines are perpendicular? Justify.

\_\_\_\_\_

[www.mathworksheets4kids.com](http://www.mathworksheets4kids.com)

- 5) Equation of the lines are  $y = -2x - 1$  and  $10y = 5x + 1$ . Prove that the lines are perpendicular.

\_\_\_\_\_

**Parallel and Perpendicular Lines**

- 1) Equation of two lines are  $y = -4x + 1$  and  $4y = x - 8$ . Are the lines parallel or perpendicular? Justify.

**slope of  $y = -4x + 1$  is  $-4$**

**slope of  $4y = x - 8$  is  $\frac{1}{4}$**

**Product of their slopes equals to  $-1$ , the lines are perpendicular.**

---

- 2) Equation of a line  $u$  is  $y = -x + 2$ . Slope of a line  $v$  is  $-1$ . Prove that the lines are parallel.

**slope of  $u = -$**

**slope of  $u = s$**

**The lines  $u$  are**

---

- 3) Equation of a line  $g$  is  $y = 7x + 5$ . Prove that the lines are perpendicular.

**slope of  $g = 7$**

**slope of  $g \times s$**

**The lines are**

---

- 4) Equation of  $\vec{PQ}$  is  $y = 2x + 5$ . Prove that the lines are perpendicular? Justify.

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

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

**$\vec{PQ}$  is parallel to  $\vec{RS}$ .**

---

- 5) Equation of the lines are  $y = -2x - 1$  and  $10y = 5x + 1$ . Prove that the lines are perpendicular.

**slope of  $y = -2x - 1$  is  $-2$**

**slope of  $10y = 5x + 1$  is  $\frac{1}{2}$**

**Product of their slopes equals to  $-1$ , the lines are perpendicular.**

---

# PREVIEW

Gain complete access to the largest collection of worksheets in all subjects!

Members, please  
log in to  
download this  
worksheet.

Not a member?  
Please sign up to  
gain complete  
access.

www.mathworksheets4kids.com