

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

## Parallel and Perpendicular Lines

Sheet 3

- 1) Equation of  $\overleftrightarrow{EF}$  is  $\frac{1}{9}y = x - 7$ . Equation of  $\overleftrightarrow{GH}$  is  $y = 9x + 13$ . Prove that  $\overleftrightarrow{EF} \parallel \overleftrightarrow{GH}$ .

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- 2) Equation of a line  $m$  is  $y = -8x + 4$ . Equation of a line  $n$  is  $-2y - 16x + 1 = 0$ . Are the lines parallel or perpendicular? Justify your answer.

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- 3) Equation of two lines are  $y = 2x + 3$  and  $y = -\frac{1}{2}x + 5$ . Are the lines parallel or perpendicular? Justify your answer.

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- 4) Equation of a line  $m$  is  $y = 3x + 2$  and equation of a line  $n$  is  $y = -\frac{1}{3}x + 4$ . Are the lines parallel or perpendicular? Justify.

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\_\_\_\_\_ lines perpendicular?

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- 5) Equation of the lines are  $y + 6x = -9$  and  $4y = -24x + 11$ . Are the lines parallel or perpendicular? Justify your answer.

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