

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

Score : \_\_\_\_\_

## Parallel and Perpendicular Lines

Sheet 1

- 1) Find the equation of the line that is parallel to the line  $4y + 48 - 16x = 0$  and passes through the point  $(-4, -2)$ .

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- 2) Find the equation of the line passing through the point  $(7, -3)$  and perpendicular to the line joining the points  $(1, 4)$  and  $(3, 6)$ .

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- 3) Find the equation of the line passing through the point  $(-2, 1)$  and parallel to the line which has a slope of 5.

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- 4) Find the equation of the line passing through the point  $(-1, 5)$  and perpendicular to the line  $y = \frac{3}{4}x + 6$ .

---

- 5) A line  $l$  passing through the point  $(8, 9)$  is parallel to the line  $n$  that cuts the x and y axis at  $x = -3$  and  $y = 6$ . Find the equation of the line  $l$ .

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

Score : \_\_\_\_\_

**Answer key**

Sheet 1

**Parallel and Perpendicular Lines**

- 1) Find the equation of the line that is parallel to the line  $4y + 48 - 16x = 0$  and passes through the point  $(-4, -2)$ .

$$\underline{\quad 4x - y = -14 \quad}$$

- 2) Find the equation of the line passing through the point  $(7, -3)$  and perpendicular to the line joining the points  $(1, 4)$  and  $(3, 6)$ .

$$\underline{\quad x + y = 4 \quad}$$

- 3) Find the equation of the line passing through the point  $(-2, 1)$  and parallel to the line which has a slope of 5.

$$\underline{\quad 5x - y = -11 \quad}$$

- 4) Find the equation of the line passing through the point  $(-1, 5)$  and perpendicular to the line  $y = \frac{3}{4}x + 6$ .

$$\underline{\quad 4x + 3y = 11 \quad}$$

- 5) A line  $l$  passing through the point  $(8, 9)$  is parallel to the line  $n$  that cuts the x and y axis at  $x = -3$  and  $y = 6$ . Find the equation of the line  $l$ .

$$\underline{\quad 2x - y = 7 \quad}$$

## Parallel and Perpendicular Lines

Sheet 2

- 1) Find the equation of the line that is perpendicular to the line  $y = -3x + 1$  and passes through the point  $(6, -4)$ .

---

- 2) Find the equation of the line passing through the point  $(-9, 1)$  and parallel to the line  $x - \frac{1}{6}y = -3$ .

---

- 3) A line  $u$  passing through the x-axis at  $x =$

---

- 4) Find the equation of the line joining the

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- 5) The slope of a line  $l$  is  $-\frac{1}{7}$  and is perpendicular to the line  $m$  that passes through the point  $(-3, -5)$ . Find the equation of the line  $m$ .

---

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to the line  $v$  that cuts the line  $u$ .

and parallel to the

**Answer key**

Sheet 2

**Parallel and Perpendicular Lines**

- 1) Find the equation of the line that is perpendicular to the line  $y = -3x + 1$  and passes through the point  $(6, -4)$ .

$$\underline{\underline{x - 3y = 18}}$$

- 2) Find the equation of the line passing through the point  $(-9, 1)$  and parallel to the line  $x - \frac{1}{6}y = -3$

$$\underline{\underline{6x - y = 55}}$$

- 3) A line  $u$  passing through the x-axis at  $x = 5$

$$\underline{\underline{5x + 4y = 0}}$$

- 4) Find the equation of the line joining the points  $(-2, 3)$  and  $(4, -1)$

$$\underline{\underline{3x + 2y - 20 = 0}}$$

- 5) The slope of a line  $l$  is  $-\frac{1}{7}$  and is perpendicular to the line  $m$  that passes through the point  $(-3, -5)$ . Find the equation of the line  $m$ .

$$\underline{\underline{7x - y = -16}}$$

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## Parallel and Perpendicular Lines

Sheet 3

- 1) The slope of a line  $m$  is  $-1$  and is parallel to the line  $n$  that passes through the point  $(8, -5)$ . Find the equation of the line  $n$ .
- 
- 

- 2) A line  $u$  passing through the point  $(-2, -2)$  is parallel to the line  $v$  that cuts the  $x$  and  $y$  axis at  $x = -5$  a
- 
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- 3) Find the equation to the line joining
- 
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- 4) Find the equation through the poi
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and perpendicular

$y = -8x - 7$  and passes

- 5) Find the equation of the line passing through the point  $(7, 6)$  and parallel to the line  $-2x + 2y - 6 = 0$ .
- 
-

**Answer key****Parallel and Perpendicular Lines**

Sheet 3

- 1) The slope of a line  $m$  is  $-1$  and is parallel to the line  $n$  that passes through the point  $(8, -5)$ . Find the equation of the line  $n$ .

$$\underline{x + y = 3}$$

- 2) A line  $u$  passing through the point  $(-2, -2)$  is parallel to the line  $v$  that cuts the  $x$  and  $y$  axis at  $x = -5$

$$\underline{2x + y}$$

- 3) Find the equation to the line joining

$$\underline{3x - y}$$

- 4) Find the equation through the poi

$$\underline{x - 8y = -7, 5}$$

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- 5) Find the equation of the line passing through the point  $(7, 6)$  and parallel to the line  $-2x + 2y - 6 = 0$ .

$$\underline{x - y = 1}$$

and perpendicular

 $y = -8x - 7$  and passes

## Parallel and Perpendicular Lines

Sheet 4

- 1) A line  $p$  passing through the point  $(-6, 1)$  is perpendicular to the line  $q$  that cuts the  $x$  and  $y$  axis at  $x = 7$  and  $y = 2$ . Find the equation of the line  $p$ .
- 

- 2) Find the equation of the line passing through the point  $(8, 4)$  and parallel to the line which has a
- 

- 3) Find the equation of the line passing through the point
- 

- 4) Find the equation of the line joining the points  $(-3, -2)$  and  $(1, 4)$ .
- 

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- 5) Find the equation of the line passing through the point  $(7, 4)$  and perpendicular to the line  $y = \frac{6}{7}x + 9$ .
-

**Answer key**

Sheet 4

**Parallel and Perpendicular Lines**

- 1) A line  $p$  passing through the point  $(-6, 1)$  is perpendicular to the line  $q$  that cuts the  $x$  and  $y$  axis at  $x = 7$  and  $y = 2$ . Find the equation of the line  $p$ .

$$\underline{7x - 2y = -44}$$

- 2) Find the equation of the line passing through the point  $(8, 4)$  and parallel to the line which has a

$$\underline{2x - y}$$

- 3) Find the equation of the line passing through the point  $(-3, 2)$  and perpendicular to the line which has a

$$\underline{2x - 3y}$$

- 4) Find the equation of the line passing through the points  $(-3, 2)$  and  $(1, -3)$  and perpendicular to the line joining the points  $(-3, 2)$  and  $(1, -3)$ .

$$\underline{x + 2y = -5}$$

- 5) Find the equation of the line passing through the point  $(7, 4)$  and perpendicular to the line  $y = \frac{6}{7}x + 9$ .

$$\underline{7x + 6y = 73}$$

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## Parallel and Perpendicular Lines

Sheet 5

- 1) Find the equation of the line that is parallel to the line  $y = -8x + 3$  and passes through the point  $(9, 4)$ .  
\_\_\_\_\_
- 2) Find the equation of the line passing through the point  $(-5, 2)$  and perpendicular to line  $x - \frac{1}{8}y = 0$ .  
\_\_\_\_\_
- 3) The slope of a line is  $\frac{1}{2}$ . If the line passes through the point  $(-4, -6)$ , find the equation of the line.  
\_\_\_\_\_

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- 4) Find the equation of the line joining the points  $(-2, 3)$  and  $(4, -1)$ .  
\_\_\_\_\_
- 5) A line  $u$  passing through the point  $(-10, 8)$  is parallel to the line  $v$  that cuts the  $x$ -axis at  $x = 5$  and  $y$ -axis at  $y = 7$ . Find the equation of the line  $u$ .  
\_\_\_\_\_

**Answer key****Parallel and Perpendicular Lines**

Sheet 5

- 1) Find the equation of the line that is parallel to the line  $y = -8x + 3$  and passes through the point (9, 4).

$$\underline{\underline{8x + y = 76}}$$

- 2) Find the equation of the line passing through the point (-5, 2) and perpendicular to line  $x - \frac{1}{8}y = 1$

$$\underline{\underline{x + 8y}}$$

- 3) The slope of a line passes through the point (-4, -6)

$$\underline{\underline{x + 6y}}$$

- 4) Find the equation of the line joining the points (-2, 3) and (4, -1)

$$\underline{\underline{x + 2y = -11}}$$

- 5) A line  $u$  passing through the point (-10, 8) is parallel to the line  $v$  that cuts the x-axis at  $x = 5$  and y-axis at  $y = 7$ . Find the equation of the line  $u$ .

$$\underline{\underline{7x + 5y = -30}}$$

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