

Name : _____

Score : _____

Parallel and Perpendicular Lines

Sheet 1

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

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

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

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

Answer key

Sheet 1

Parallel and Perpendicular Lines

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

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

- 2) Write 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) The line l passes through the point $(-2, 1)$ and parallel to the line m which has a slope of 5. Find the equation of the line l .

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

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

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

Parallel and Perpendicular Lines

- 1) The line u passing through the point $(6, 8)$ and perpendicular to the line v whose slope is $\frac{3}{5}$. Find the equation of the line u .

- 2) Find the equation of the line that is parallel to the line $7x - y + 3 = 0$ and passes through the point $(2, -1)$.

- 3) Write the equation of the line that is perpendicular to the line $-4x + 8y + 16 = 0$ and passes through the point $(-2, 3)$.

- 4) The line m passing through the points $(-1, 2)$ and $(1, 6)$ has a slope of 6. Find the equation of the line n which has a

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- 5) Find the equation of the line that is perpendicular to the line $2x + 3y + 5 = 0$ and passes through the point $(2, -4)$.

Answer key**Parallel and Perpendicular Lines**

Sheet 2

- 1) The line u passing through the point $(6, 8)$ and perpendicular to the line v whose slope is $\frac{3}{5}$. Find the equation of the line u .

$$\underline{\underline{5x + 3y = 54}}$$

- 2) Find the equation of the line that is parallel to the line $7x - y + 3 = 0$ and passes through the point $(2, -1)$.

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

- 3) Write the equation of the line that is perpendicular to the line $2x + y = 5$ and passes through the point $(-1, 2)$.

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

- 4) The line m passing through the points $(-2, 1)$ and $(1, 4)$ has a slope of 6. Find the equation of the line n which has a slope of $-\frac{1}{6}$ and passes through the point $(2, -4)$.

$$\underline{\underline{6x - y = -45}}$$

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- 5) Find the equation of the line that is perpendicular to the line $2x + 3y + 5 = 0$ and passes through the point $(2, -4)$.

$$\underline{\underline{3x - 2y = 14}}$$

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Parallel and Perpendicular Lines

Sheet 3

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

- 2) Write the equation of the line that is parallel to the line $5 = 4y - 9x$ and passes through the poi

- 3) Find the equation to the line n wh

- 4) Write the equat through the poi

- 5) The line l passes through the point $(1, 7)$ and parallel to the line m whose slope is 9 . Find the equation of the line l .

-6) and perpendicular

$7x = 2$ and passes

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Answer key**Parallel and Perpendicular Lines**

Sheet 3

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

$$\underline{5x + y = -6}$$

- 2) Write the equation of the line that is parallel to the line $5 = 4y - 9x$ and passes through the poi

$$\underline{9x - 4y}$$

- 3) Find the equation to the line n wh

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

- 4) Write the equat through the poi

$$\underline{8x + 7y = \underline{\hspace{2cm}}}$$

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- 5) The line l passes through the point $(1, 7)$ and parallel to the line m whose slope is 9 . Find the equation of the line l .

$$\underline{9x - y = 2}$$

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Parallel and Perpendicular Lines

Sheet 4

- 1) Write the equation of the line passing through the point (8, 1) and perpendicular to the line joining the points (3, 4) and (9, 2).

- 2) The line k passes through the point (7, -6) and parallel to the line h which has a slope of 9. Find

- 3) Find the equation of the line passing through the point (-2, 3) and perpendicular to the line $y = 0$ and passes

- 4) A line s passing through the x-axis at $x = 9$ and

- 5) Find the equation of the line passing through the point (-2, 3) and perpendicular to the line $y = \frac{5}{3}x - 10$.

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Answer key**Parallel and Perpendicular Lines**

Sheet 4

- 1) Write the equation of the line passing through the point (8, 1) and perpendicular to the line joining the points (3, 4) and (9, 2).

$$\underline{3x - y = 23}$$

- 2) The line k passes through the point (7, -6) and parallel to the line h which has a slope of 9. Find

$$\underline{9x - y}$$

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

$$\underline{5x - y = 0}$$

- 4) A line s passing through the x-axis at $x = 9$ and

$$\underline{7x - 9y - 55}$$

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- 5) Find the equation of the line passing through the point (-2, 3) and perpendicular to the line $y = \frac{5}{3}x - 10$.

$$\underline{3x + 5y = 9}$$

Name : _____

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Sheet 5

Parallel and Perpendicular Lines

- 1) A line v passing through the point $(-9, -1)$ and parallel to the line w which has a slope of -3 . Find the equation of the line v .

- 2) Write the equation of the line that is perpendicular to the line $-3x + 21y + 24 = 0$ and passes thro

- 3) The line r passes through the points $(-2, 1)$ and $(4, 5)$. The slope is $\frac{7}{6}$. Find the equation of the line r .

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

- 5) Find the equation of the line that is perpendicular to the line joining the points $(-2, 8)$ and $(4, 9)$ and passes through the point $(1, -1)$.

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Answer key**Parallel and Perpendicular Lines**

Sheet 5

- 1) A line v passing through the point $(-9, -1)$ and parallel to the line w which has a slope of -3 . Find the equation of the line v .

$$\underline{3x + y = -28}$$

- 2) Write the equation of the line that is perpendicular to the line $-3x + 21y + 24 = 0$ and passes thro

$$\underline{7x + y}$$

- 3) The line r passes through the points $(-2, 1)$ and $(4, 7)$. The slope is $\frac{7}{6}$. Find the equation of the line r .

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

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

$$\underline{5x + 4y = -5},$$

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- 5) Find the equation of the line that is perpendicular to the line joining the points $(-2, 8)$ and $(4, 9)$ and passes through the point $(1, -1)$.

$$\underline{6x + y = 5}$$