Parallel, Perpendicular Lines and Their Slopes

MATH MONKS

1. Determine whether the given slopes form a pair of 'Parallel' or 'Perpendicular' lines.

a. $m = 7$, $m = 7$ _____ lines

b. $m = \frac{5}{2}$, $m = -\frac{2}{5}$ _____ lines

c. $m = 9$, $m = -\frac{1}{9}$ _____ lines

d. $m = 11$, $m = 11$ _____ lines

e. $m = \frac{3}{4}$ $m = -\frac{4}{3}$ _____ lines

f. $m = 8$, $m = 8$ _____ lines

2. Find the slope of the lines and answer the questions that follow.

a. $2x + 3y = 7$

Slope of:

Parallel ☐

Perpendicular ☐

b. $\frac{7}{5}y - 2x = 3$

Slope of:

Parallel ☐

Perpendicular ☐

c. $7x - 5y = 30$

Slope of:

Parallel ☐

Perpendicular ☐

d. $x + y = 0$

Slope of:

Parallel ☐

Perpendicular ☐

e. $x - 6 = 2y$

Slope of:

Parallel ☐

Perpendicular ☐

f. $y = \frac{3}{4}x + 5$

Slope of:

Parallel ☐

Perpendicular ☐

g. $3y - 2x = 4$

Slope of:

Parallel ☐

Perpendicular ☐

h. $y = \frac{8}{3}x + 5$

Slope of:

Parallel ☐

Perpendicular ☐

i. $y = 5x + \frac{7}{11}$

Slope of:

Parallel ☐

Perpendicular ☐

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Answers

a.	$m = 7$,	$m = 7$	Parallel lines
b.	$m = \frac{5}{2}$,	$m = -\frac{2}{5}$	Perpendicular lines
c.	$m = 9$,	$m = -\frac{1}{9}$	Perpendicular lines
d.	$m = 11$,	$m = 11$	Parallel lines
e.	$m = \frac{3}{4}$	$m = -\frac{4}{3}$	Perpendicular lines
f.	$m = 8$,	$m = 8$	Parallel lines

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a. $2x + 3y = 7$

Slope of:

Parallel $-\frac{2}{3}$

Perpendicular $\frac{3}{2}$

b. $\frac{7}{5}y - 2x = 3$

Slope of:

Parallel $\frac{10}{7}$

Perpendicular $-\frac{7}{10}$

c. $7x - 5y = 30$

Slope of:

Parallel $\frac{7}{5}$

Perpendicular $-\frac{5}{7}$

d. $x + y = 0$

Slope of:

Parallel -1

Perpendicular 1

e. $x - 6 = 2y$

Slope of:

Parallel $\frac{1}{2}$

Perpendicular -2

f. $y = \frac{3}{4}x + 5$

Slope of:

Parallel $\frac{3}{4}$

Perpendicular $-\frac{4}{3}$

g. $3y - 2x = 4$

Slope of:

Parallel $\frac{2}{3}$

Perpendicular $-\frac{3}{2}$

h. $y = \frac{8}{3}x + 5$

Slope of:

Parallel $\frac{8}{3}$

Perpendicular $-\frac{3}{8}$

i. $y = 5x + \frac{7}{11}$

Slope of:

Parallel 5

Perpendicular $-\frac{1}{5}$