

A.A.38: Parallel and Perpendicular Lines: Determine if two lines are parallel, given their equations in any form

- 1 Which equation represents a line that is parallel to the line $y = -4x + 5$?
 - 1) $y = -4x + 3$
 - 2) $y = -\frac{1}{4}x + 5$
 - 3) $y = \frac{1}{4}x + 3$
 - 4) $y = 4x + 5$
- 2 Which equation represents a line parallel to the line $y = 2x - 5$?
 - 1) $y = 2x + 5$
 - 2) $y = -\frac{1}{2}x - 5$
 - 3) $y = 5x - 2$
 - 4) $y = -2x - 5$
- 3 Which equation represents a line that is parallel to the line whose equation is $y = -3x - 7$?
 - 1) $y = -3x + 4$
 - 2) $y = -\frac{1}{3}x - 7$
 - 3) $y = \frac{1}{3}x + 5$
 - 4) $y = 3x - 2$
- 4 Which equation represents a line that is parallel to the line whose equation is $y = -3x$?
 - 1) $\frac{1}{3}x + y = 4$
 - 2) $-\frac{1}{3}x + y = 4$
 - 3) $6x + 2y = 4$
 - 4) $-6x + 2y = 4$
- 5 Which equation represents a line that is parallel to the line $y = 3 - 2x$?
 - 1) $4x + 2y = 5$
 - 2) $2x + 4y = 1$
 - 3) $y = 3 - 4x$
 - 4) $y = 4x - 2$
- 6 Which equation represents a line parallel to the graph of $2x - 4y = 16$?
 - 1) $y = \frac{1}{2}x - 5$
 - 2) $y = -\frac{1}{2}x + 4$
 - 3) $y = -2x + 6$
 - 4) $y = 2x + 8$
- 7 Which equation represents a line that is parallel to the line whose equation is $2x - 3y = 9$?
 - 1) $y = \frac{2}{3}x - 4$
 - 2) $y = -\frac{2}{3}x + 4$
 - 3) $y = \frac{3}{2}x - 4$
 - 4) $y = -\frac{3}{2}x + 4$
- 8 Which equation represents a line that is parallel to the line whose equation is $2x + 3y = 12$?
 - 1) $6y - 4x = 2$
 - 2) $6y + 4x = 2$
 - 3) $4x - 6y = 2$
 - 4) $6x + 4y = -2$
- 9 The graphs of the equations $y = 2x - 7$ and $y - kx = 7$ are parallel when k equals
 - 1) -2
 - 2) 2
 - 3) -7
 - 4) 7

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Answer Section

1 ANS: 1

The slope of both is -4 .

REF: 060814ia

2 ANS: 1

The slope of both is 2 .

REF: 080009a

3 ANS: 1

$m = -3$

REF: 081307ia

4 ANS: 3

$m = -3 \quad \frac{-A}{B} = \frac{-6}{2} = -3$

REF: 081427ia

5 ANS: 1

The slope of $y = 3 - 2x$ is -2 . Using $m = -\frac{A}{B}$, the slope of $4x + 2y = 5$ is $-\frac{4}{2} = -2$.

REF: 010926ia

6 ANS: 1

The slope of $2x - 4y = 16$ is $\frac{-A}{B} = \frac{-2}{-4} = \frac{1}{2}$

REF: 011026ia

7 ANS: 1

Using $m = -\frac{A}{B}$, the slope of $2x - 3y = 9$ is $\frac{2}{3}$.

REF: 011322ia

8 ANS: 2

Using $m = -\frac{A}{B}$, the slope of both $2x + 3y = 12$ and $6y + 4x = 2$ is $-\frac{2}{3}$.

REF: 010522a

9 ANS: 2

$y - kx = 7$ may be rewritten as $y = kx + 7$

REF: 061015ia