

Name: _____ Date: _____ Score: ____ / 10

INSTRUCTIONS

For multiple-choice questions, circle the letter of the correct answer. For short-answer and problem-solving questions, show your complete work in the space provided. No calculator unless your teacher says otherwise.

1 Which relation represents a function?

Multiple Choice

A $\{(1,2), (2,3), (3,4)\}$ **B** $\{(1,2), (1,3), (2,4)\}$ **C** $\{(0,0), (0,1), (0,2)\}$ **D** $\{(2,5), (2,6)\}$ **2 If $f(x) = 2x - 3$, find $f(4)$.**

Multiple Choice

A 5**B** 8**C** 11**D** 2**3 What is the domain of $f(x) = 1/(x - 5)$?**

Multiple Choice

A All real numbers except $x = 5$ **B** All real numbers except $x = 0$ **C** All real numbers**D** $x \geq 5$ **4 Short Answer — If $f(x) = x^2 + 1$, find $f(-3)$.**

Short Answer

5 Find the slope of the line through (2, 3) and (6, 11).

Multiple Choice

A 2**B** $1/2$ **C** 4**D** 8**6 Write the slope-intercept equation of the line with slope 3 passing through (2, 5).**

Multiple Choice

A $y = 3x - 1$ **B** $y = 3x + 1$ **C** $y = 3x + 5$ **D** $y = 3x - 5$

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Short Answer — Convert $2x + 3y = 12$ to slope-intercept form.

Short Answer

8

Which line is parallel to $y = 4x - 7$?

Multiple Choice

A

$y = 4x + 2$

B

$y = -\frac{1}{4}x + 2$

C

$y = \frac{1}{4}x - 7$

D

$y = -4x - 7$

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Problem Solving — Determine whether the lines $y = 2x + 5$ and $y = -\frac{1}{2}x + 3$ are parallel, perpendicular, or neither. Justify your answer.

Problem Solving

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Problem Solving — A cell phone plan costs \$20 per month plus \$0.10 per text message. Write a function $C(t)$ for the total monthly cost based on t texts sent, then find the cost for sending 150 texts.

Problem Solving