Algebra 1 Quick quiz 10182023

1

The length of a rectangular flat-screen television is six inches less than twice its width, x. If the area of the television screen is 1100 square inches, which equation can be used to determine the width, in inches?

(1) $x(2x - 6) = 1100$

(2) $x(6 - 2x) = 1100$

(3) $2x + 2(2x - 6) = 1100$

(4) $2x + 2(6 - 2x) = 1100$

2.

What is the product of $(2x + 7)$ and $(x - 3)$?

(1) $2x^2 - 21$

(2) $2x^2 + x - 21$

(3) $2x^2 + 4x - 21$

(4) $2x^2 + 13x - 21$

3.

If $\frac{k-3}{9}=\frac{2}{3}$, what is the value of k?

A 3
B 6
C 7
D 9

4.

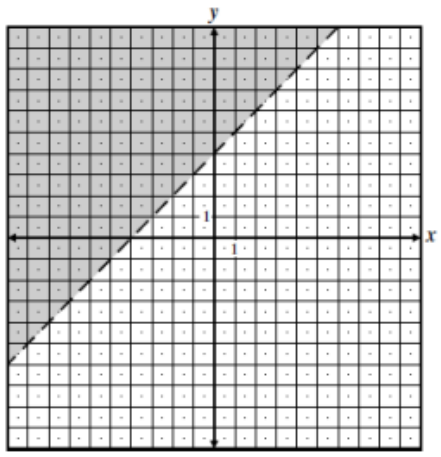
Jerry had k pencils. Darcy and Leonard then gave Jerry an additional x pencils each. Which expression could represent the number of pencils Jerry has now?

A $k + x$
B $k + 2x$
C $2k + x$
D $2(k + x)$

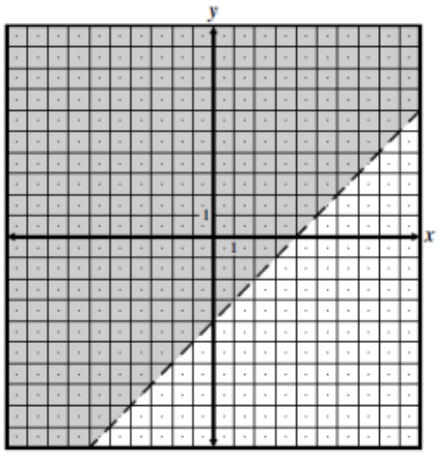
5. You may use your Graphing calculator or Desmos to do this question.

Which of these shows the inequality $y > 4 - x$?

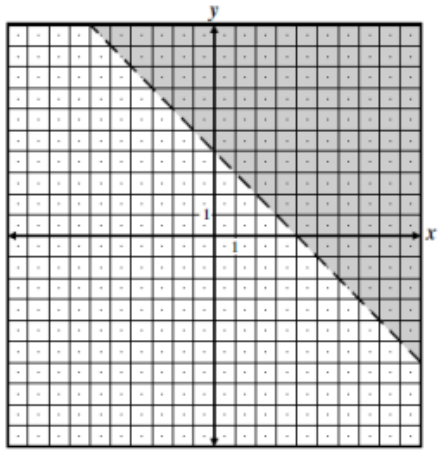
A



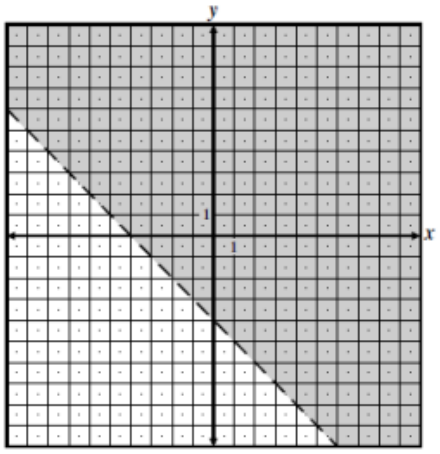
C



B



D



6.

Which expression represents $y^4 - 36$ in simplest factored form?

A $(y^2+4)(y^2-9)$

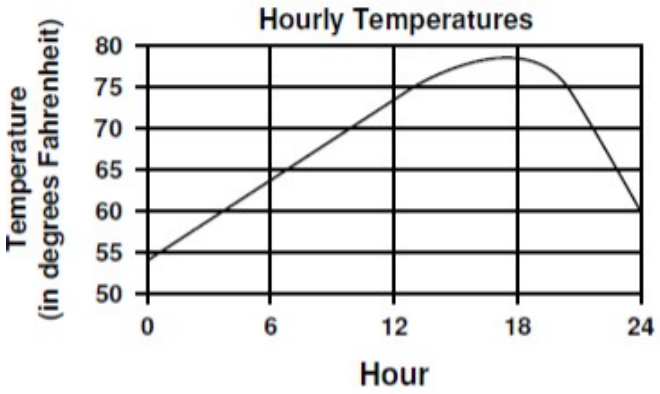
B $(y^2+4)(y-3)(y+3)$

C $(y^2+6)(y^2-6)$

D $(y^4-36)(y+1)$

7.

The graph below shows the outside temperature recorded every hour for a 24-hour period in Larry's hometown.



What is the range of this graph?

A 54°F to 78°F
B 1 hour to 24 hours
C 54°F to 60°F
D 24 hours to 80 hours

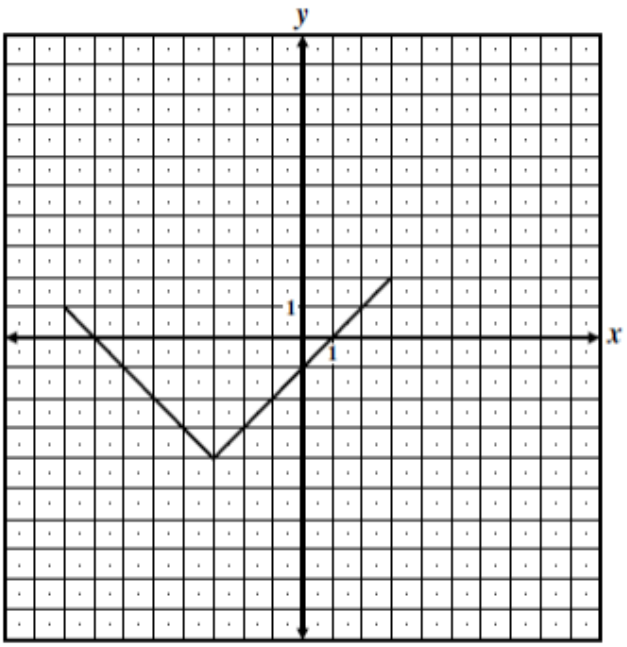
8.

What are the zeros of $m(x) = x(x^2 - 16)$?

(1) -4 and 4, only
(2) -8 and 8, only
(3) -4, 0, and 4
(4) -8, 0, and 8

9.

Which of the following BEST describes the domain of the relation graphed below?



A $\{y \text{ such that } -8 \leq y \leq 2\}$
B $\{x \text{ such that } -4 \leq x \leq 3\}$
C $\{y \text{ such that } -4 \leq y \leq 2\}$
D $\{x \text{ such that } -8 \leq x \leq 3\}$

10.

The range of $f(x) = x^2 + 2x - 5$ is the set of all real numbers

(1) less than or equal to -6

(2) greater than or equal to -6

(3) less than or equal to -1

(4) greater than or equal to -1

11. BONUS

What are the solutions to the equation $\frac{3}{4}x^2 = 48$?

Enter your answers in the space provided. Enter **only** your answers.

$x =$ [ ] and $x =$ [ ]