Inspiring Greatness

INDEPENDENCE SCHOOL DISTRICT

Math Virtual Learning

Algebra 1 S2

May 4th, 2020

Algebra 1 S2
Lesson: May 4th, 2020

Learning Target:

Students will be introduced to vertex form by exploring translations, reflection, and scale changes.

Warm-Up

1. The equations below model the numbers of two watches sold (y) and days after both watches were introduced (x).

Watch 1: $y = 191x - 32$ Watch 2: $y = -x^2 + 200x + 20$

A) On what day(s) did the company sell the same number of each watch?

B) How many watches of each type were sold?

Warm-Up

2. A student says that the system $y = x^2 + 2x + 4$ and $y = x + 1$ has one solution. Is the student right or wrong? Explain why and show all work.

Warm-Up

Answer to 1:

Watch 1: $y = 191x - 32$

Watch 2: $y = -x^2 + 200x + 20$

X = # of days after release
Y = # of watches sold

$-x^2 + 200x + 20 = 191x - 32$

$+x^2 \quad -200x \quad -20 \quad +x2 - 200x - 20$

$0 = x^2 - 9x - 52$

$0 = (x - 13)(x + 4)$

$x - 13 = 0 \qquad x + 4 = 0$

$+13 \quad +13 \qquad -4 \quad -4$

$x = 13 \qquad x = -4$

You can't have negative days

$y = 191(13) - 32$

$y = 2483 - 32$

$y = 251$

A) Both companies sold the same amount of the watches on day 13.

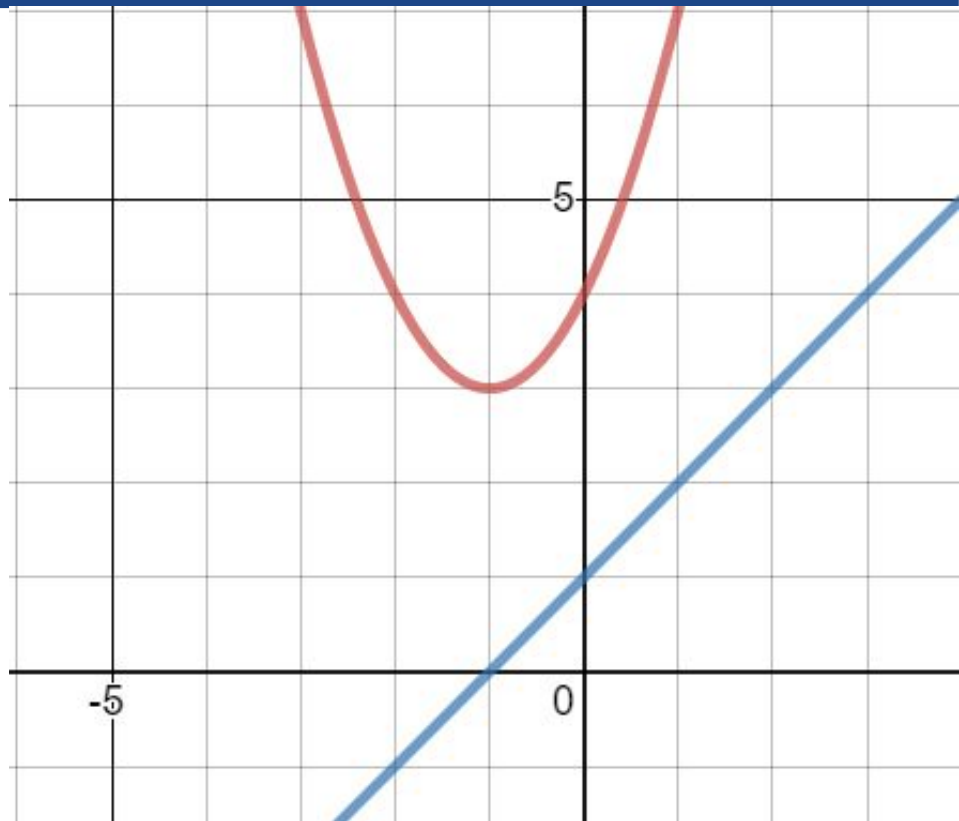
B) The company had sold 251 of both watches on day 13.

Warm-Up

Answer to 2: $y = x^2 + 2x + 4$

$y = x + 1$

The student is wrong when they say there is one solution. These functions do no intersect, so this means this system of equations has no solution.



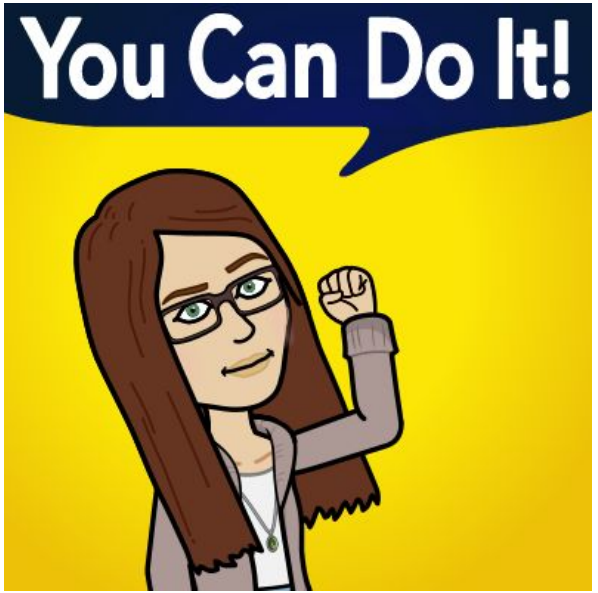
Today's Lesson

In today's lesson we will be introduced to vertex form by exploring translations, reflection, and scale changes.

Watch today's Video to practice along with a few examples before the independent practice.

Independent Practice

Here is the Practice for today. Complete it on paper, and then check your answers with the Key.



Additional Practice:

Click on the links below to get additional practice and to check your understanding!

Click here to get additional practice quadratic shifts.

*Try to get 4 green dots in a row.

Click here to get additional practice quadratic scales and reflections.

*Try to get 4 green dots in a row.