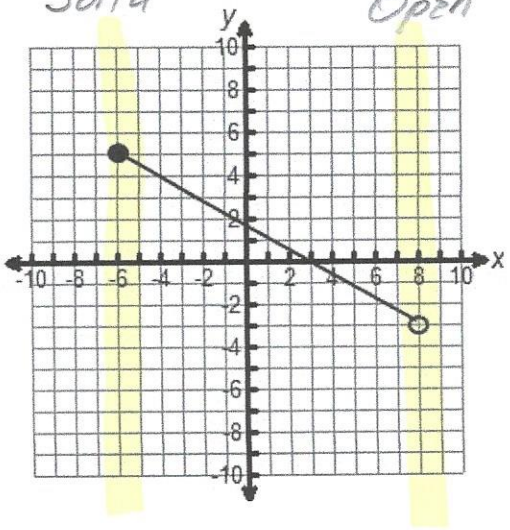
Algebra 1 Unit 2, Functions, v2

GO ON

1 Given the graph below, which of the following represents the domain of the function?



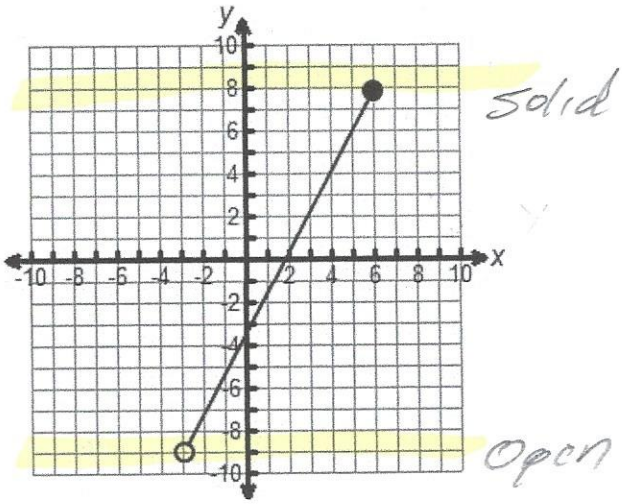
A Domain: $x \in \Re$

B Domain: $-6 < x < 8$

C Domain: $-6 \leq x < 8$

D Domain: $-3 < x \leq 6$

2 A function is graphed below.



Which of the following represents the range of the function?

A Range: $-3 < y \leq 6$

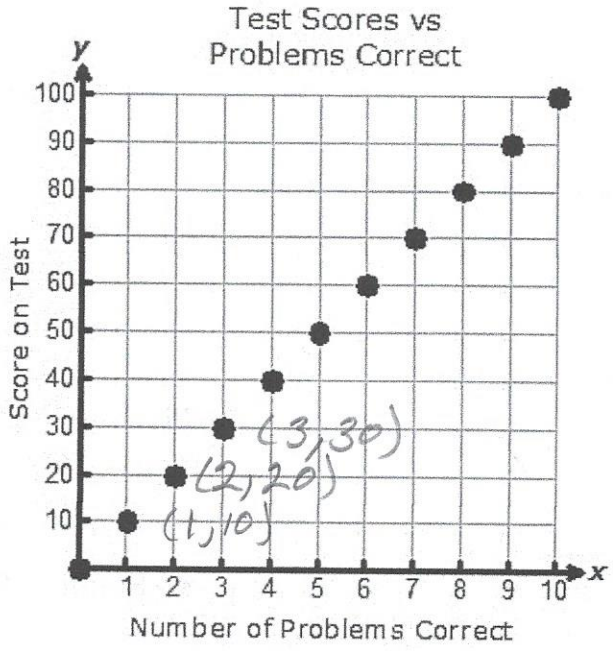
B Range: $-9 \leq y < 8$

C Range: $y \in \Re$

D Range: $-9 < y \leq 8$

GO ON

3 Mr. Freeman gave his students a 10-problem, multiple choice quiz over equations. In grading the test, he gave students ten points for each correct answer with no partial credit. The graph below represents the score students could make as a function of the number of questions they answered correctly on the quiz.



X Line Points

What is the domain of the function, and is the function continuous or discrete?

A {0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10}, discrete

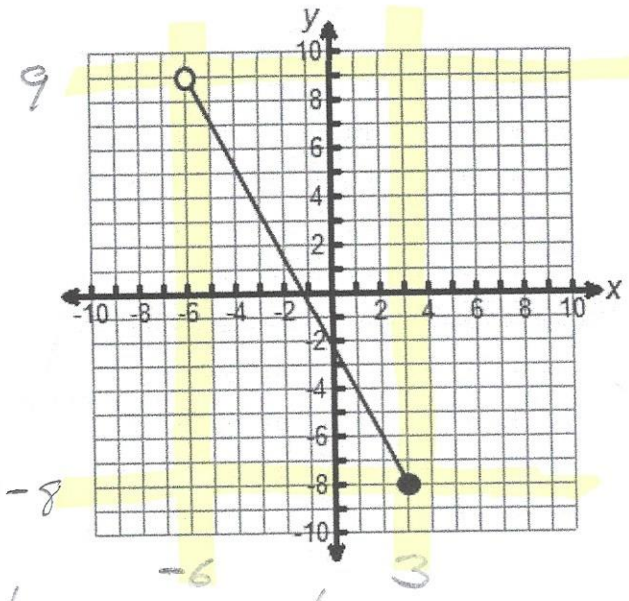
B {0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100}, discrete

C $0 \leq x \leq 100$, continuous

D $0 \leq x \leq 10$, continuous

GO ON

4 The graph below shows a line segment on a coordinate plane.



9
-8
-6
3
Vertical
X
Horizontal
Y

$-6 < X \leq 3$

$-8 \leq Y < 9$

What is the domain and range of the line segment?

A Domain: All real numbers
Range: All real numbers

B Domain: All real numbers greater than –6 and less than 3
Range: All real numbers greater than –8 and less than 9

C Domain: All real numbers greater than –6 and less than or equal to 3
Range: All real numbers greater than or equal to –8 and less than 9

D Domain: All real numbers greater than –8 and less than or equal to 9
Range: All real numbers greater than –6 and less than or equal to 3

5 The total cost in dollars to buy calculator sets for the students in Mr. Engle's math class can be found using the function $C = 75.95s + 12.25$, where s is the number of calculators purchased. If there are at least 27 students but not more than 31 students in Mr. Engle's math class, what is the range of the function for this situation?

A $0 < s \leq 31$

B $0 < c \leq 2366.70$

C {27, 28, 29, 30, 31}

D {2062.90, 2138.85, 2214.80, 2290.75, 2366.70}

y, output

$C = 75.95s + 12.25$

↑ Output ↑ Input

# of Calc.

27 28 29 30 31

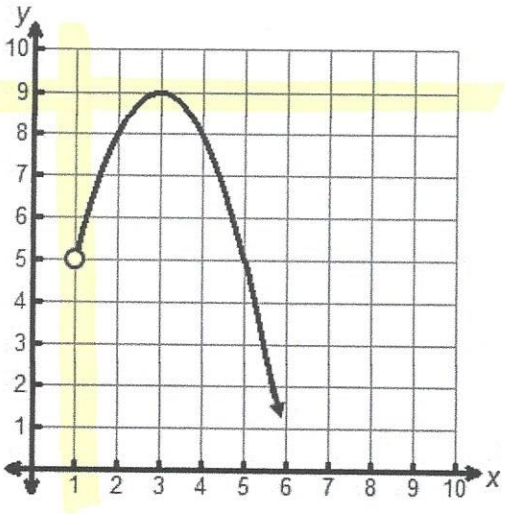
$C = 75.95(27) + 12.25$

$C = 2062.90$

GO ON

Vertical, X Y, Horizontal

6 What are the domain and range for the quadratic function in the graph below?



A Domain: $x \geq 9$
Range: $y > 1$

B Domain: $x > 1$
Range: $y \leq 9$

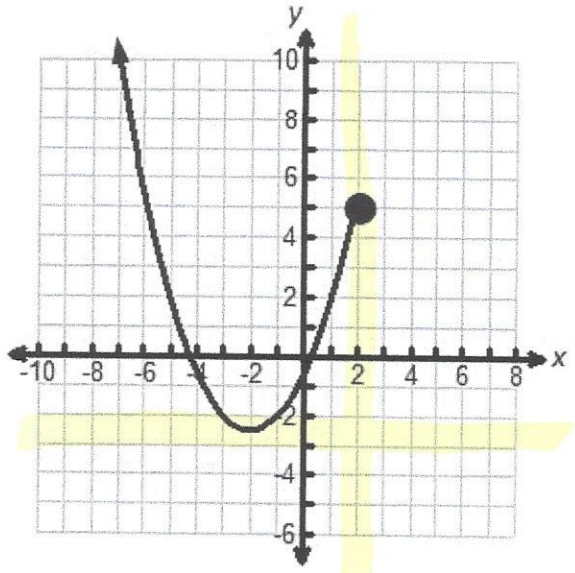
C Domain: $1 < x \leq 6$
Range: $0 \leq y \leq 9$

D Domain: $x \geq 1$
Range: $y < 9$

$X > 1$
↑
open

$y \leq 9$
↑
solid

7 A quadratic function is shown on the graph below.



Vertical X Y, Horizontal

What are the domain and range for the quadratic function shown on the graph?

A Domain: $x \leq 2$
Range: $y \geq -2.5$

B Domain: $x < 2$
Range: $y > -2.5$

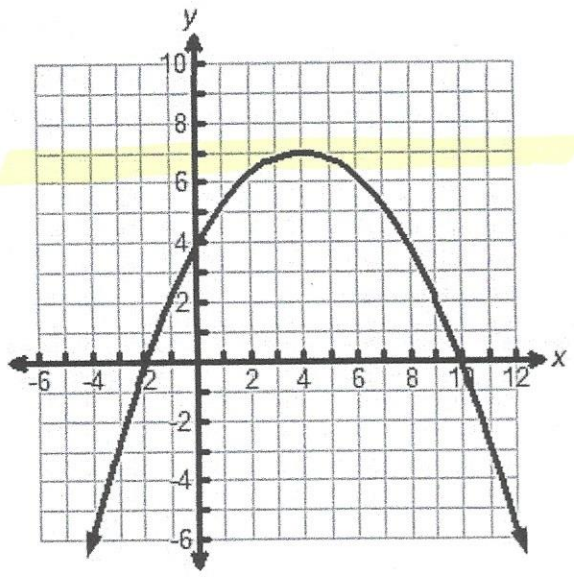
C Domain: $x \geq -2.5$
Range: $y \leq 2$

D Domain: $-7 \leq x \leq 2$
Range: $-2.5 \leq y \leq 5$

$X \leq 2$ $Y \geq -2.5$
↑ ↑
solid solid

GO ON

8 A quadratic function is shown on the graph below.



What are the domain and range for the quadratic function shown on the graph?

A Domain: All real numbers
Range: All real numbers less than or equal to 7

B Domain: All real numbers greater than or equal to −5 and less than or equal to 12
Range: All real numbers greater than or equal to −6 and less than or equal to 7

C Domain: All real numbers less than or equal to 7
Range: All real numbers

D Domain: All real numbers
Range: All real numbers less than 7

9 Some ordered pairs from quadratic function *w* are shown in the table below.

x	−5	−3	−1	1	2	3	5
$w(x)$	−47	−23	−7	1	2	1	−7

What is the range of *w*?

A All real numbers greater than or equal to 2

B All real numbers less than or equal to 1

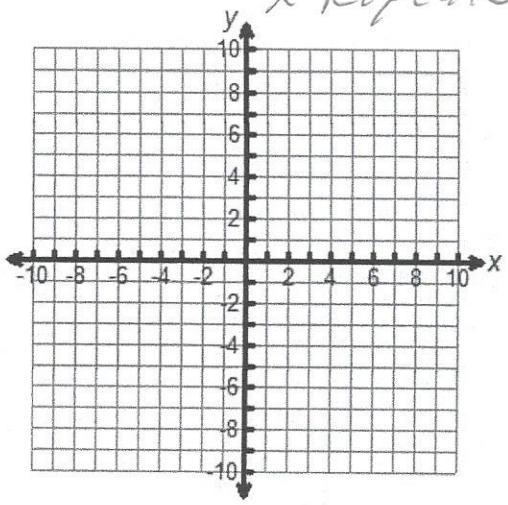
C All real numbers less than or equal to 2

D All real numbers

GO ON

10 Which set of points would NOT define a function?

X Repeats



A {(−2, −2), (−1, −1), (0, 0), (1, 1), (2, 2)}

B {(−2, 9), (0, 1), (1, 0), (3, 4), (4, 9)}

Repeats

C {(−1, 0), (0, 1), (0, −1), (3, 2), (3, −2)}

Repeats

D {(−6, 2), (−5, 1), (−4, 0), (−3, 1), (−2, 2)}

11 The table below represents the data collected in an experiment to determine a representative function comparing the angle of incline of a ramp and the distance a model car travels after it leaves the ramp.

Depends

X

Model Car Experiment Y

Angle of Ramp in Degrees x	Distance Traveled from End of Ramp in Centimeters $f(x)$
5	12
10	18
15	24
20	30
25	36
30	42
35	48

f(x)

Evaluate the function for $f(30)$.

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

x value is 30

↳ Output is 42

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS ON YOUR ANSWER DOCUMENT

STOP