Math Jeopardy

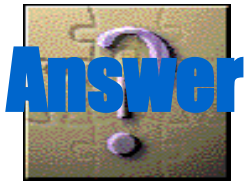
Math Jeopardy

EXIT

Vocabulary	Relation and Functions	Function Rules	Rate of Change	Function Notation	Domain &\ Range
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5

1 Point

A set of ordered pairs

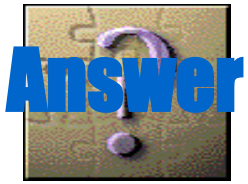


1 Point

What is a relation?

2 Points

All the independent variables in the functions ordered pairs, the x coordinates

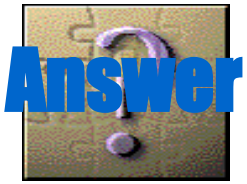


2 Points

What is the domain?

3 Points

All the values of the dependent variables in a function, the y-coordinates

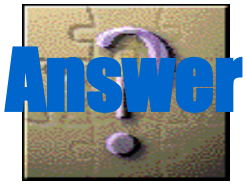


3 Points

What is the range?

4 Points

A relation that assigns exactly one value in the range to each value in the domain

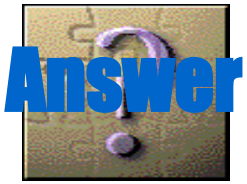


4 Points

What is a function?

5 Points

In a function, the domain is the set of _____values, and the range is the set of _____values



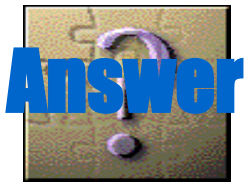
5 Points

What is the input and the output?

1 Point

Find the range when the domain is {-2,0,5} for the equation

$$y = -4x$$



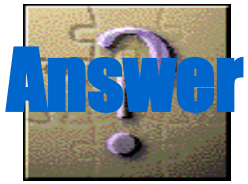
1 Point

What is
{-20, 0, 8}?

2 Points

Use a mapping to determine if the relation is a function

{(3,7) (3,8) (3, -2) (3,4) (3,1)



2 Points

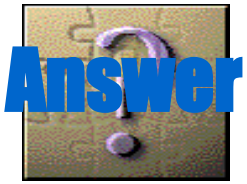
no

3 Points

Evaluate the function

$$y = 3x + 2$$

for x = -3

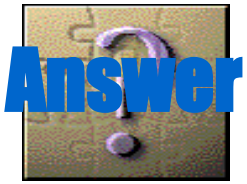


3 Points

-7

4 Points

can the graph of a function be a horizontal line?

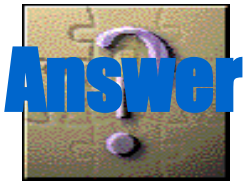


4 Points

YES

5 Points

Can the graph of a function be a vertical line?

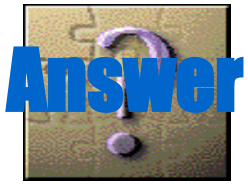


5 Points

NO

1 Point

The inputs are values of the _____ variable.

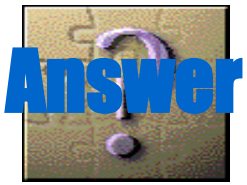


1 Point

independent

2 Points

In the equation y = 2x -7, if the input is 4, what is the output?

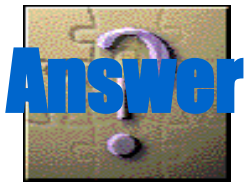


2 Points

1

3 Points

The outputs are values of the _____ variable.



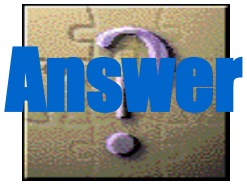
3 points

dependent

4 Points

The equation w = 6m models the gallons of water *w* used by a standard shower head for a shower that takes *m* minutes. The function w = 3m models the water –saving shower head.

Suppose you take a 6-minute shower using a water-saving shower head. How much water do you save compared to an average shower with a standard shower head?

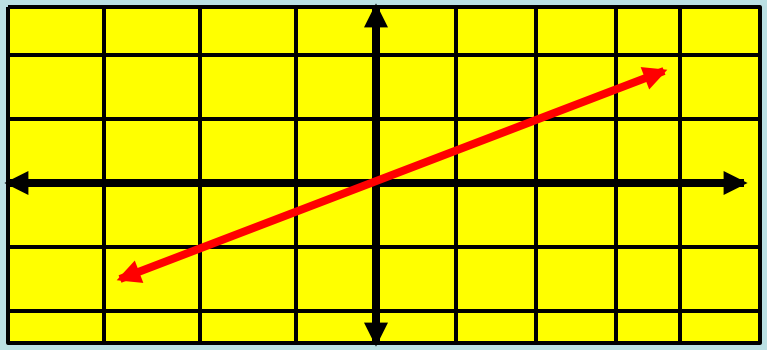


4 Points

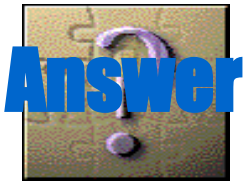
18 gallons

5 points

Which equation matches the graph?



A. y = 2x B. y = ½ x C. y = x + 2 D. y = x - 2

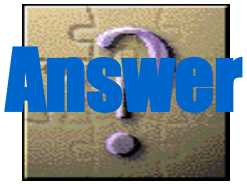


5 points

B- $y=\frac{1}{2}x$

1 Point

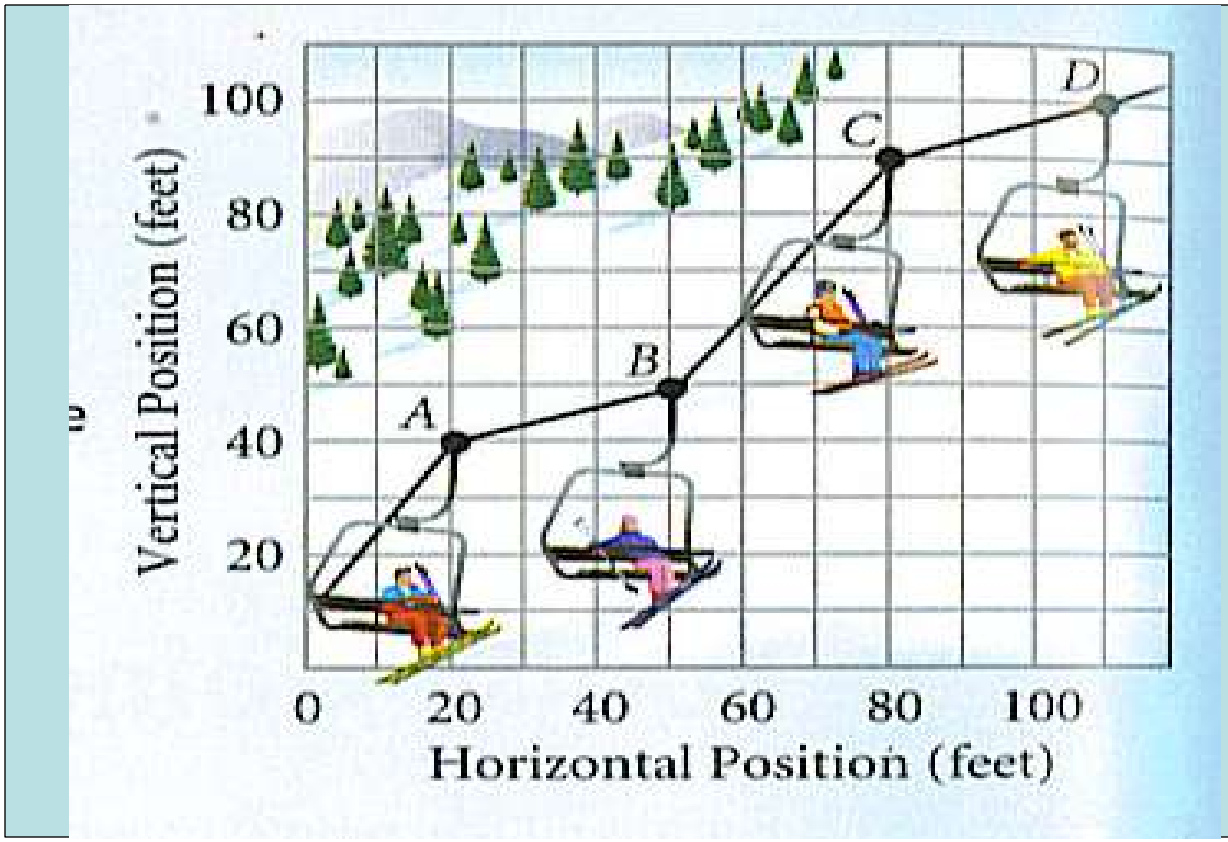
The independent variable is plotted on the _____ axis.



1 Point

horizontal
or x-axis

2 Points



What is the horizontal rate of change from

B to C?

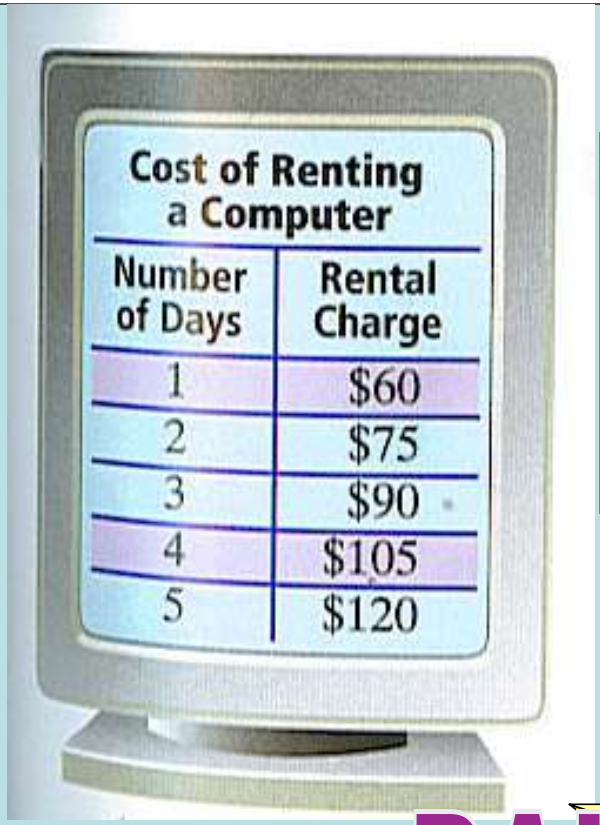
Back to

Answer

2 points

30

3 Points



What does the rate of change represent in the table (Describe using words)?

DAILY DOUBLE

Back to

Answer

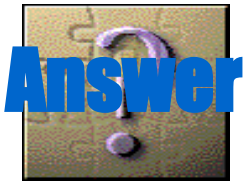
3 Points

It costs $15 for each day a computer is rented.

4 points

Time (hours)	Temperature (°F)
1	−2
4	7
7	16
10	25
13	34

What is the rate of change (slope) for each interval?

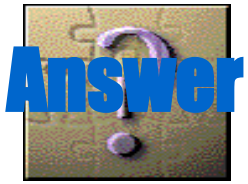


4 Points

3

5 Points

$$\text{RATE OF CHANGE} = \frac{?}{?}$$



5 Points

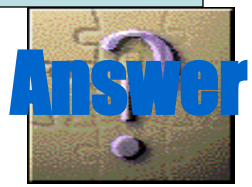
$$\frac{Change\ in\ y}{Change\ in\ x}$$

1 Point

5-0

$g(x) = -3x + 1$

Find $g(10)$.



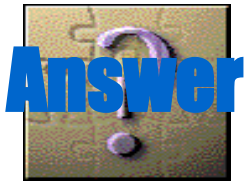
1 Point

g(10)=-29

2 Points

$$h(x) = \frac{-3}{4}x + 4$$

Find h(-12).



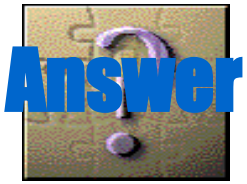
2 Points

h(-12)=13

3 Points

$$g(x) = -9-5x$$

if $g(x)=-34$ find x.



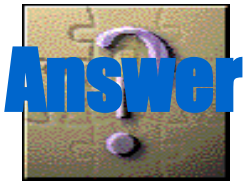
3 Points

$x=5$

4 Points

It is well known that the more you prepare, the better you will do on a test in school. Let's assume that if you just pay attention in class and take good notes, you will pass with a 60. For each hour that you spend studying (including all of the homework you do), your test grade will go up 8 points.

Write a function that demonstrates this situation.



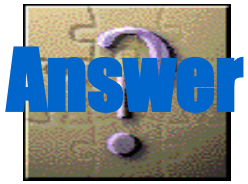
4 Points

$$f(x) = 8x + 60$$

5 Points

The temperature of the water at the surface of a deep lake is 22°C on a warm summer's day. As Renaldo scuba dives to the depths of the lake, he finds that the temperature decreases by 1.5°C for every 8 m he descends.

a) Model the water temperature at any depth using function notation.



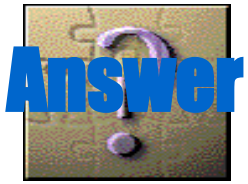
5 Points

$$T(d) = 22 - 1.5\left(\frac{d}{8}\right)$$

1 Point

What is the domain and range of this relation?

{ (3 , 1), (2 , 3), (0 , -3), (9 , -2) }



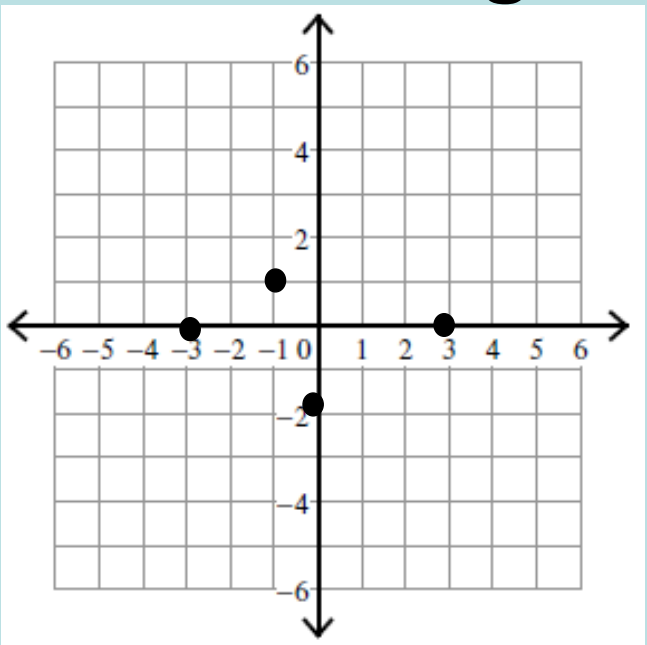
1 point

slope intercept form

30 Points

2 Points

Identify the domain and range:



Back to

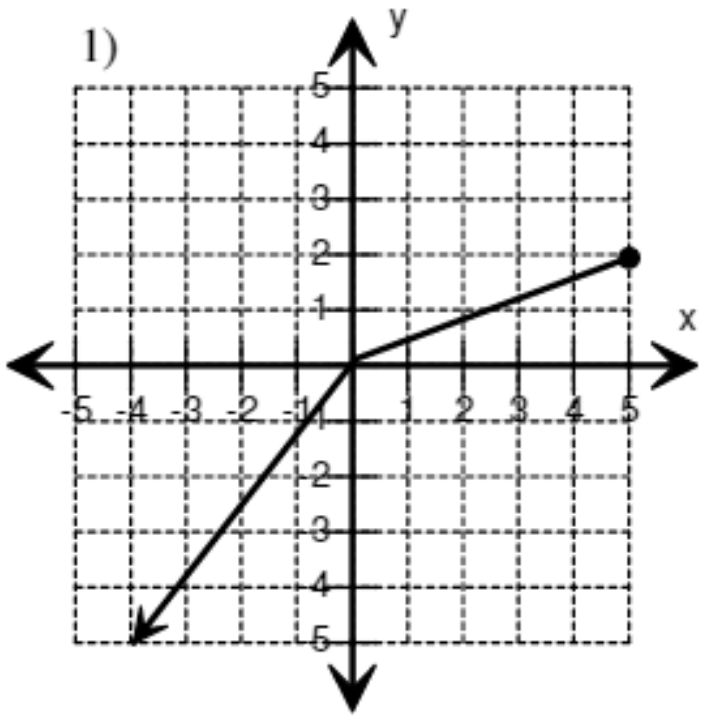
Answer

2 Points

Domain: (-3, -1, 0, 3)
Range: (0, 1, -2)

3 Points

Identify the domain and range using inequality signs.



Back to

Answer

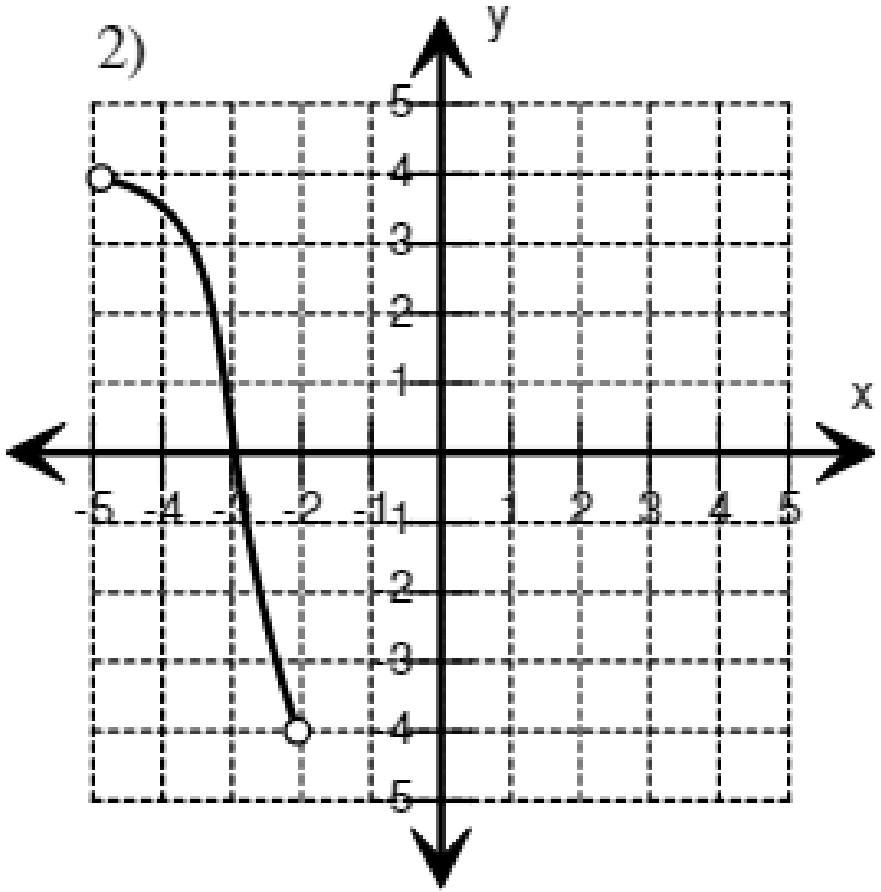
3 Points

Domain: $(-\infty \leq x \leq 5)$

Range: $(-\infty \leq y \leq 2)$

4 points

Identify the domain and range using inequality signs.



Back to

Answer

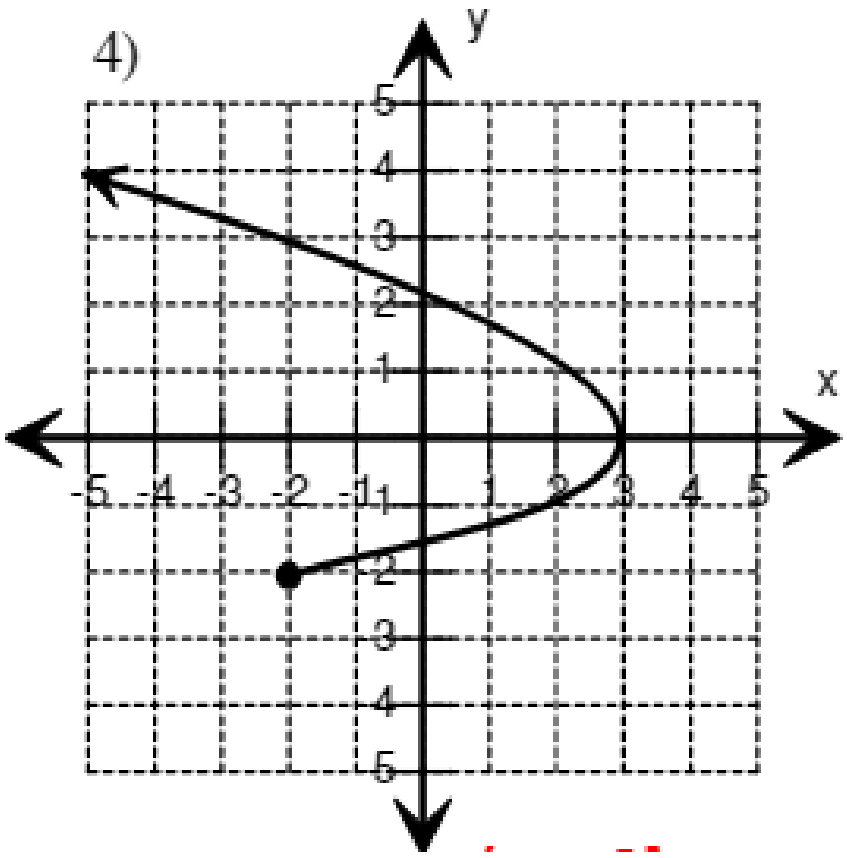
4 Points

Domain: $(-5 < x < -2)$

Range: $(-4 < y < 4)$

5 Points

Identify the Domain and Range using inequality signs.



Back to

Answer

5 Points

Domain: $(-\infty \leq x \leq 3)$

Range: $(-2 \leq y \leq \infty)$

Final Jeopardy

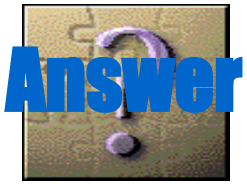
Alice starts a babysitting business. She charges $10 per hour. The number of hours Alice babysits depends on the number of referrals she gets from current jobs. She usually sits her neighbor's toddler for 2 hours, and then gets an extra 1.5 hours for each referral.

a) **Write a function (f) showing how much money Alice makes per hour.**

b) **Write a function (g) showing how many hours Alice works in a week based on referrals.**

c) **How many hours would she work in a week that she got 3 referrals?**

d) **How much money would she make if she had 20 referrals?**



Final Jeopardy

f(x)=$10x

g(x)=1.5x+2

6.5 hours

$320.00

Help for Teachers

To create a new set of categories and problems:

Update topics on title screen (slide 2)

Rename category headers on question board (slide 3)

Change category help slides (immediately following question board)

Modify questions and answers (answers immediately follow each question slide)

Cut and Paste Daily Doubles

Tips:

Questions and answers are MathType objects. It is easier if you keep it that way. Even for text problems.

To put copy of question on the answer slide, copy and paste the MathType object from the question slide then resize.

The EXIT graphic on the game board will exit WITHOUT saving anything. It is intended for student use when playing.

Make sure you test your game to make sure everything is linked and working correctly.

When playing the intro screen of the game you can click in the lower right corner at any time to skip the intro and go directly to the question board.

Do NOT:

Change any hyperlinks

Type <ctrl><home> to return to 1st slide