

Algebra 1 AIR Questions for CH 1

1 - Jim charges customers for work he does around their house using a function named $c(h)$ in which h is in hours and $c(h)$ is in dollars.

- Describe the meaning of $c(4) = 44$
- Describe a charge of \$60 for 6 hours of work using function notation.

2 - John pays his employees \$100 per day of work. John uses the function $p(e)$ to find the total payroll in dollars based on e , the number of employees who worked on that day.

- Describe the meaning of $c(6) = 600$
- Describe a charge of \$900 for 9 employees using function notation.

3 - Jenny is a coach and is ordering shirts for her players. She always orders 3 extra shirts. Each player will receive 1 shirt and there are x players on the team.

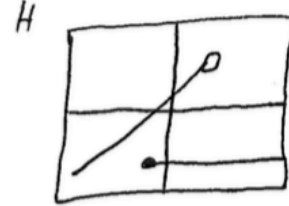
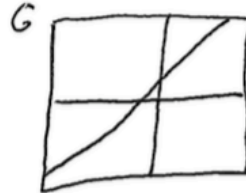
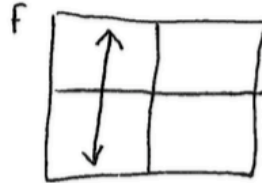
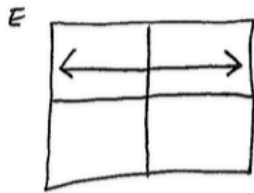
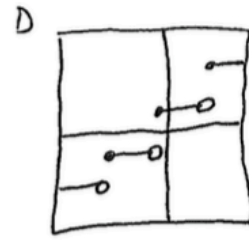
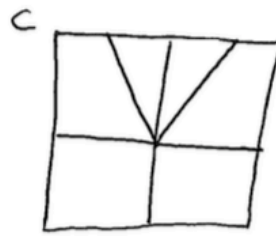
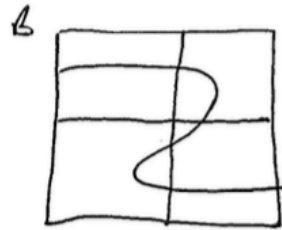
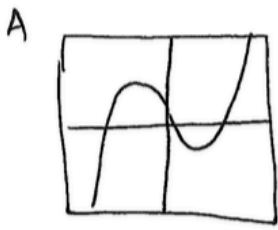
- Write a function $s(x)$ to describe the total shirts to order.
- Describe the meaning of the $s(5) = 8$ in the context of the situation.
- Is $s(7) = 12$ part of the solution set for $s(x)$? Describe.

4 $k(x) = .2(x - 5)$ find $k(2)$ find $k(-2)$ true or false: $k(0) < 0$

5 $j(x) = x - x^5$ find $j(25)$ find $j(9)$ true or false: $j(x)$ is linear

6 $n(t) = 100(2)^t$ find $n(2)$ find $n(-1)$ true or false $n(0) < j(0)$

7 - Select all of the follow that are functions:



8 - Select ALL of the following that are functions:

A

x	y
0	5
1	8
2	9
3	1

B

x	y
0	2
1	0
2	0
3	2

C

x	y
-1	3
0	4
1	5
2	6

D

x	y
-1	7
0	9
1	12
1	3

9 - use the table:

x	0	1	2	3	4	5	A
y	12	3	2	1	-1	1	7

For what value of A could the table represent a function?

- A. 0 B. 2 C. 4 D. 6

Algebra 1 AIR Questions for CH 1

Key

1 - Jim charges customers for work he does around their house using a function named $c(h)$ in which h is in hours and $c(h)$ is in dollars.

a. Describe the meaning of $c(4) = 44$ 4 hours of work = \$44 charge

b. ^{Describe a} ~~Write the~~ charge of \$60 for 6 hours of work using function notation.

$$c(6) = 60$$

2 - John pays his employees \$100 per day of work. John uses the function $p(e)$ to find the total payroll in dollars based on e , the number of employees who worked on that day.

a. Describe the meaning of $c(6) = 600$ 6 workers = \$600 payroll

b. ^{Describe a} ~~Write the~~ charge of \$900 for 9 ^{employees} ~~hours of work~~ using function notation.

$$c(9) = 900$$

3 - Jenny is a coach and is ordering shirts for her players. She always orders 3 extra shirts. Each player will receive 1 shirt and there are x players on the team.

a. Write a function $s(x)$ to describe the total shirts to order.

$$s(x) = x + 3$$

b. Describe the meaning of the $s(5) = 8$ in the context of the situation.

5 players, 8 shirts ordered

c. Is $s(7) = 12$ part of the solution set for $s(x)$? Describe.

No $s(7) = 7 + 3 = 10$ $s(7) = 10$ is the correct value

* 4 $k(x) = .2(x - 5)$

find $k(2)$
 $k(2) = .2(2 - 5)$
 $k(2) = -.6$

find $k(-2)$
 $k(-2) = .2(-2 - 5)$
 $k(-2) = -1.4$

True or false: $k(0) < 0$
 $k(0) = .2(0 - 5)$
 $= -1$
 $-1 < 0$ - true

* 5 $j(x) = x - x^{.5}$

find $j(25)$
 $j(25) = 25 - 25^{.5}$
 $j(25) = 25 - 5$
 $j(25) = 20$

find $j(9)$
 $j(9) = 9 - 9^{.5}$
 $j(9) = 9 - 3$
 $j(9) = 6$

True or false: $j(x)$ is linear
 false $x^{.5}$ is not linear

* 6 $n(t) = 100(2)^{t^2}$

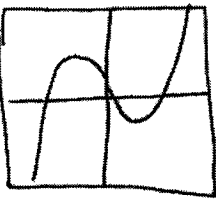
find $n(2)$
 $n(2) = 100(2)^2$
 $n(2) = 400$

find $n(-1)$
 $n(-1) = 100(2)^{(-1)^2}$
 $n(-1) = 50$

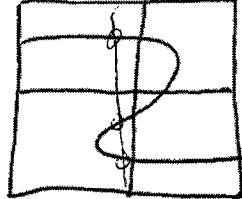
True or false: $n(0) < j(0)$
 $n(0) = 100(2)^0$ $j(0) = 0 - 0^{.5}$
 $n(0) = 100$ $j(0) = 0$
 $100 < 0$ false

7 - Select all of the follow that are functions:

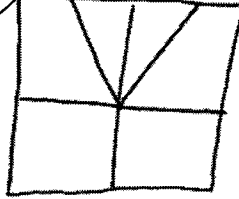
A



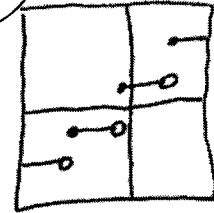
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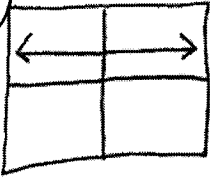
C



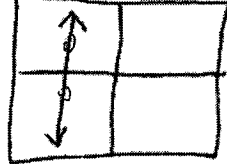
D



E



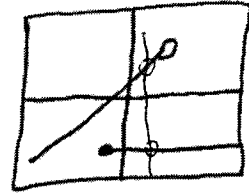
F



G



H



8 - Select ALL of the following that are functions:

A

x	y
0	5
1	8
2	9
3	1

B

x	y
0	2
1	0
2	0
3	2

C

x	y
-1	3
0	4
1	5
2	6

D

x	y
-1	7
0	9
1	12
1	3

Fail

9 - use the table:

x	0	1	2	3	4	5	A
y	12	3	2	1	-1	1	7

For what value of A could the table represent a function?

A. 0

B. 2

C. 4

D. 6

All others repeat the x-value