

ADVANCED MATH 7 REVIEW

Name: _____

Date: _____

Hour: _____

Systems of Equations and Functions Review

Solve each system by substitution. Write your solution as an ordered pair OR write no solution or infinitely many solutions.

1. $y = \begin{cases} 6x - 4 \\ -2x + 28 \end{cases}$

3. $\begin{cases} -3x - y = -13 \\ x = -2y + 6 \end{cases}$

2. $\begin{cases} y = x - 2 \\ 2x + 2y = 4 \end{cases}$

4. $\begin{cases} 4x - 2y = 6 \\ y = 2x - 3 \end{cases}$

Solve each system by elimination. Write your solution as an ordered pair OR write no solution or infinitely many solutions.

5. $\begin{cases} x - y = 11 \\ 2x + y = 19 \end{cases}$

7. $\begin{cases} 3x - 2y = 2 \\ 5x - 5y = 10 \end{cases}$

6. $\begin{cases} -2x - 9y = -25 \\ -4x - 9y = -23 \end{cases}$

8. $\begin{cases} -2x + 4y = 6 \\ -3x + 6y = 8 \end{cases}$

9. A large group of students wants to go to the movies. If the students take 3 vans and 1 car, they can transport 22 people. If they take 2 vans and 4 cars, they can transport 28 people. Write and solve a system of equations to find the number of people that can be transported in a van. Show your work.

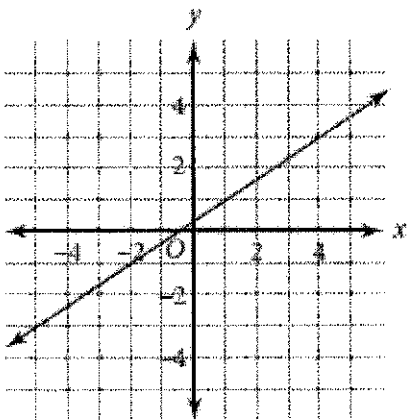
10. At an ice cream parlor, ice cream cones cost \$1.10 and sundaes cost \$2.35. One day, the receipts for a total of 172 cones and sundaes were \$294.20. How many cones were sold? Show your work.

11. If the function is $f(x) = x + 3$, give the range value when the domain is 3.6.

ADVANCED MATH 7 REVIEW

For the following relations: a) state the domain, b) state the range, and c) tell whether or not it is a function.

12.



13.

x	-2	-1	0	1	2
y	8	4	0	4	8

14.

$\{(1, 5), (0.5, 8), (0, 3)\}$

15.

$f(x) = 20x - 4$, for $x = -2$ and $x = 8$

16.

$f(x) = 5x^2$, for $x = -3$ and $x = 5$ _____

For the following situations, match the correct table and graph with the situation.

17.

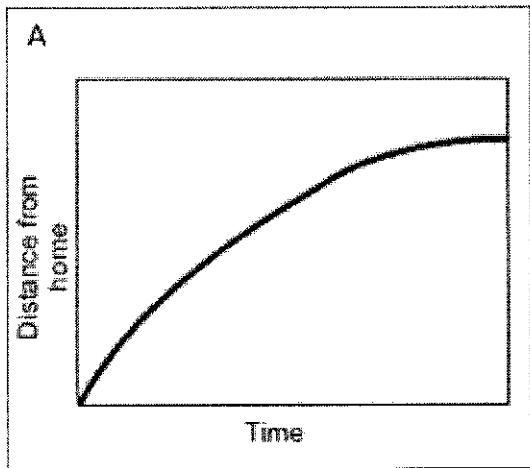


table:

situation:

18.

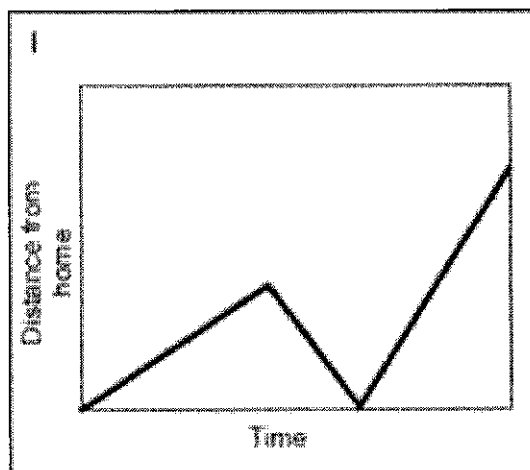


table:

situation:

- | | |
|---|---|
| 1 Tom ran from his home to the bus stop and waited. He realized that he had missed the bus so he walked home. | 2 Opposite Tom's home is a hill. Tom climbed slowly up the hill, walked across the top, and then ran quickly down the other side. |
| 3 Tom skateboarded from his house, gradually building up speed. He slowed down to avoid some rough ground, but then speeded up again. | 4 Tom walked slowly along the road, stopped to look at his watch, realized he was late, and then started running. |
| 5 Tom left his home for a run, but he was unfit and gradually came to a stop! | 6 Tom walked to the store at the end of his street, bought a newspaper, and then ran all the way back. |
| 7 Tom went out for a walk with some friends. He suddenly realized he had left his wallet behind. He ran home to get it and then had to run to catch up with the others. | 8 This graph is just plain wrong. How can Tom be in two places at once? |
| 9 After the party, Tom walked slowly all the way home. | |

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Tell whether the situations are linear or non-linear.

19.

x	y
-2	4
-1	1
0	0
1	1
2	4

20.

x	y
-2	4
-1	1
0	-2
1	-5
2	-8

21.

x	y
-2	.25
-1	.5
0	1
1	2
2	4