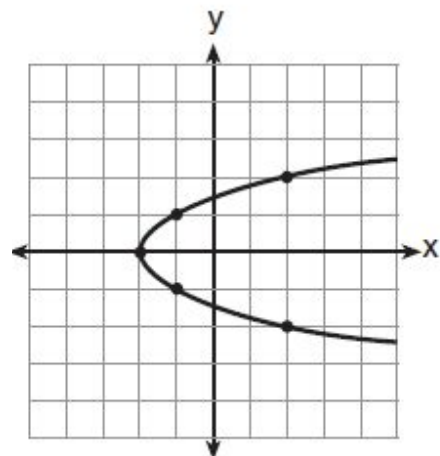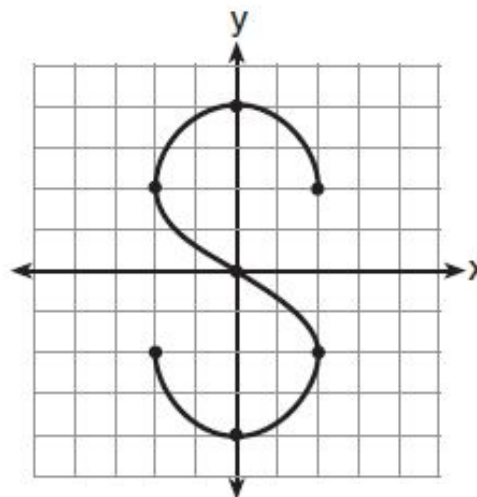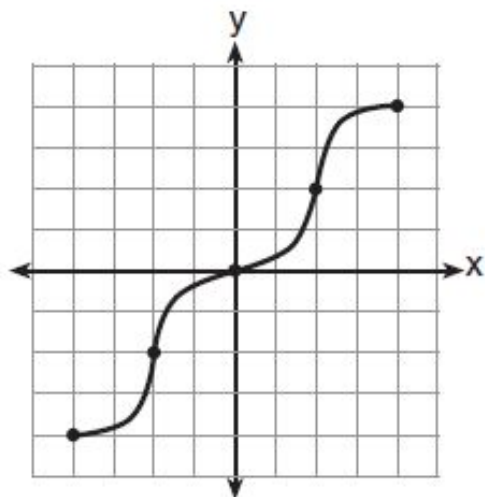**9** Which graph represents a function?

(1)

(3)

(2)

(4)
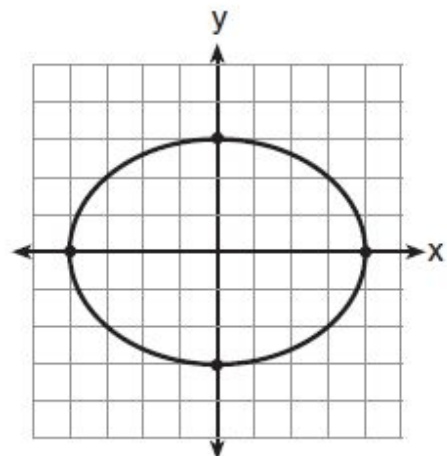
Translate the following word problems into equations and solve.

1. Four less than twice a number is ten. Find the number.

2. Three more than three times a number is one less than two times the number. What is the number?

3. The sum of seven times a number and the number is 24. What is the number?

4. Negative 18 is the sum of five and a number. Find the number.

5. Negative 14 is equal to ten minus the product of six and a number. What is the number?

6. Two less than twice a number equals the number plus 12. What is the number?

7. The difference between three times a number and 31 is two. What is the number?

8. Sixteen is fourteen less than the product of a number and five. What is the number?

9. Eight more than twice a number is four times the difference between five and the number. What is the number?

10. Three less than twice a number is three times the sum of one and the number. What is the number?

Announcements

- Today we begin the word problems unit
- You take your Math MAP in class on January 16th (and 17th)
- Friday is the last day of the quarter - double check your grades
- No school next Monday or Tuesday
- In the third quarter we will read Hidden Figures!
- NC Check-Ins on February 6th

Unit Map

- Today – Word Problems – Mixture Problems
- Tuesday– Word Problems – Age and Integer
- Wednesday – MAPs
- Thursday – MAPs
- Friday – Word Problems – Traveling

- Monday – No School
- Tuesday – No School
- Wednesday– Word Problem Review, Last Day of Quarter
- Thursday – Word Problem Informal Assessment

MALM Peer Review
In google Classroom

Problems We Should Know

1/14/2019

Solve the following word problems. (DOK 2)

1. The length of a rectangle is 4 times longer than the width. The perimeter is 30. What is the width?

2. The length of a rectangle is 3 more than twice the width. The perimeter is 36. What is the length?

3. The perimeter of a triangle is 18 feet. The second side is two feet longer than the first. The third side is two feet longer then the second. What are the lengths of the sides?

4. In an isosceles triangle, two sides are equal. The third side is two less than twice the length of the sum of the two sides. The perimeter is 40. What are the lengths of the three sides?

5. The sum of the measures of the angles of a triangle is $180°$. The second angle is three times the measure of the first angle. The third angle is four times the measure of the second angle. Find the measure of each angle.

6. The sum of the measures of the angles of a triangle is $180°$. The second angle of a triangle is twice the measure of the first angle. The third angle is 20 more than 5 times the first. What are the measures of the three angles?

1. Acacia bought an MP3 player at Everywhere Electronics for $350 and its valued depreciated linearly. Three years later, she saw the same MP3 player at Everywhere Electronics for $125. What is the amount of yearly depreciation of Acacia's MP3 player?

2. Dustin bought a boat 10 years ago for $10,000. Its value depreciated linearly and now it is worth $2,500. What is the amount of yearly depreciation of Dustin's boat?

3. A small plane costs $500,000 new. Twenty years later it is valued at $150,000. Assuming a linear depreciation, what was the value of the plane when it was 14 years old?

4. In 1980, the price of a scientific calculator was $155. In 2005, the price was $15 dollars. Assuming the change in price was linear, what was the price of a scientific calculator in 1997?

5. In 1997, Justin bought a house for $120,000. In 2004, his house was worth $176,000. Based on a linear model, how much was Justin's house worth in 2001?

6. The attendance on the first day of the Sunny Day Festival was 325 people. The attendance on the third day was 382 people. Assuming the attendance will increase linearly each day, how many people will attend the Sunny Day Festival on the seventh day?

7. Two years ago Juanita bought 2 shirts for $15 and last year she bought 4 shirts for $45. Assuming the price will increase linearly, how much will 8 shirts cost Juanita this year?

8. In 1985, the average price of a new car was $9,000. In 2000, the average price was $24,750. Based on a linear model, what is the predicted average price for 2009?

Mixture Problems

1/14/2019

Notes on Mixture Problems

The moment you see a mixture problem, get excited because we solve them all the same way! Use this chart:

You mix this thing 1	Amount of thing 1	*Sometimes there is other information about thing 1*	Multiply across
With this thing 2	Amount of thing 2	*Sometimes there is other information about thing 2*	Multiply across
To make this thing 3	Amount of thing 3	*Sometimes there is other information about thing 3*	Multiply across

Example 1

Delectable Dan's Cookie Company sells two kinds of cookies daily: chocolate chip at $6.50 per dozen and white chocolate macadamia at $9.00 per dozen. On Thursday, Dan sold 85 dozen more chocolate chip than white chocolate macadamia cookies.   The total sales for both were $4055.50. How many dozen of each were sold?

Example 2

Susan wants to mix 10 pounds of Virginia Peanuts that cost $3.50 a pound with Spanish Peanuts that cost $3 a pound to obtain a mixture that costs $3.40 a pound. How many pounds of Spanish Peanuts should she use?

Example 3

Sweatha has 30 coins in nickels and dimes. In all she has $2.10. How many nickels and dimes does she have?

Example 4

How many pounds of M&Ms that cost $0.80 per pound must be mixed with 8 pounds of pretzels that costs $1.25 per pound to make a mixture that costs $1.00 per pound?

Example 5

Kendra is doing a chemistry experiment that calls for a 30% solution of copper sulfate. She has 40ml of 25% solution. How many milliliters of 60% solution should Kendra add to obtain the required 30% solution?

Example 6

Charles is doing an experiment that calls for 40% solution of copper sulfate. He has 60 mL of a 25% solution. How many mL of a 70% solution should Charles add to obtain the required 40% solution?

Example 7

An advertisement for a pineapple drink claims that the drink contains 15% pineapple juice. How much pure pineapple juice would have to be added to 8 quarts of the drink to obtain a mixture containing 50% pineapple juice?

Example 8

You need 20 liters of 20% acid solution. You have jugs of 10% solution and 25% solution. How many liters of each should you combine to get the needed solution?

Homework

10 mixture problems found on my website under the homework tab