Mr. Little's Class

PRACTICE • GCF and LCM

Use the table to determine the greatest common factor (GCF).

Number	Factors	Number	Factors
3	1, 3	16	1, 2, 4, 8, 16
8	1, 2, 4, 8	20	1, 2, 4, 5, 10, 20
9	1, 3, 9	24	1, 2, 3, 4, 6, 8, 12, 24
12	1, 2, 3, 4, 6, 12	32	1, 2, 4, 8, 16, 32

1. 8, 24 _____ **2.** 16, 32 _____ **3.** 9, 24 _____ **4.** 3, 9 _____

5. 8, 16 _____ **6.** 12, 24 _____ **7.** 24, 32 _____ **8.** 8, 12 _____

9. 12, 16 _____ **10.** 3, 20 _____ **11.** 16, 24 _____ **12.** 3, 24 _____

Find the greatest common factor (GCF).

13. 8, 12 _____ **14.** 3, 5 _____ **15.** 12, 20 _____ **16.** 5, 20 _____

17. 13, 26 _____ **18.** 15, 36 _____ **19.** 11, 44 _____ **20.** 18, 27 _____

21. 16, 40 _____ **22.** 14, 35 _____ **23.** 15, 45 _____ **24.** 18, 42 _____

25. 20, 30 _____ **26.** 13, 39 _____ **27.** 21, 35 _____ **28.** 21, 42 _____

29. 17, 18 _____ **30.** 18, 22 _____ **31.** 24, 60 _____ **32.** 24, 40 _____

Use the table to determine the least common multiple (LCM).

Number	Multiples	Number	Multiples
3	0, 3, 6, 9, 12, 15, 18, 21, . . .	8	0, 8, 16, 24, 32, 40, 48, 56, . . .
4	0, 4, 8, 12, 16, 20, 24, 28, . . .	10	0, 10, 20, 30, 40, 50, 60, 70, . . .
6	0, 6, 12, 18, 24, 30, 36, 42, . . .	14	0, 14, 28, 42, 56, 70, 84, 98, . . .
7	0, 7, 14, 21, 28, 35, 42, 49, . . .	15	0, 15, 30, 45, 60, 75, 90, 105, . . .

33. 3, 6 _____ **34.** 6, 7 _____ **35.** 3, 8 _____ **36.** 4, 8 _____

37. 6, 10 _____ **38.** 6, 8 _____ **39.** 3, 7 _____ **40.** 6, 15 _____

41. 3, 15 _____ **42.** 8, 10 _____ **43.** 7, 14 _____ **44.** 4, 10 _____

Find the least common multiple (LCM).

45. 5, 9 _____ **46.** 3, 9 _____ **47.** 5, 11 _____ **48.** 3, 13 _____

49. 12, 18 _____ **50.** 12, 36 _____ **51.** 7, 14 _____ **52.** 15, 30 _____

53. 5, 13 _____ **54.** 4, 25 _____ **55.** 12, 60 _____ **56.** 16, 24 _____

57. 12, 11 _____ **58.** 32, 64 _____ **59.** 5, 6 _____ **60.** 15, 20 _____

Use with pages 124–125.

Name:_____ **Algebra I** **Week 5 assignment**

Exponential Growth and Decay

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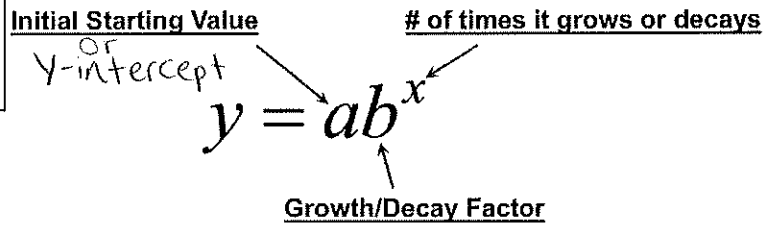
Mr. Gonzalez rgonzalez@mpisd.net

Exponential Growth and Decay Formula:



1. Scientists are studying a bacteria sample. The function $f(x) = 245(1.12)^x$ gives the number of bacteria in the sample at the end of x days.

   Which statement is the best interpretation of one of the values in this function?

   F The initial number of bacteria is 12.

   G The initial number of bacteria decreases at a rate of 88% each day.

   H The number of bacteria increases at a rate of 12% each day.

   J The number of bacteria at the end of one day is 245.

2. A student used $f(x) = 5.00(1.012)^x$ to show how the balance in a savings account will increase over time. What does the 5.00 represent?

   A The interest the savings account earned for the first year

   B The annual interest rate of the savings account

   C The number of years the savings account has earned interest

   D The starting balance of the savings account

3. There are 1,024 players in a tennis tournament. In each round, half the players are eliminated. Which function can be used to find the number of players remaining in the tournament at the end of x rounds?

   A $f(x) = 1{,}024(1.50)^x$

   B $f(x) = 1{,}024(0.50)^x$

   C $f(x) = 1{,}024(1.05)^x$

   D $f(x) = 1{,}024(0.05)^x$

Name:_____ **Algebra I** **Week 5 assignment**

Exponential Growth and Decay

4. What is the value of the y-intercept of the graph of $h(x) = 29(5.2)^x$?

Record your answer and fill in the bubbles on your answer document.

Answer:_____

5. In the year 1900, the total number of metric tons of copper produced in the world was 495,000. Each year since 1900, the total number of metric tons of copper produced has increased on average by about 3.25% over the amount produced the previous year.

Which function models the total number of metric tons of copper produced in the year that is x years since 1900?

A $c(x) = 495{,}000(1.0325)^x$

B $c(x) = 495{,}000(0.9675)^x$

C $c(x) = 495{,}000x^{1.0325}$

D $c(x) = 495{,}000x^{0.9675}$

6. A particular type of cell doubles in number every hour. Which function can be used to find the number of cells present at the end of h hours if there are initially 4 of these cells?

A $n = 4\left(\frac{1}{2}\right)^h$

B $n = 4(2)^h$

C $n = 4 + (2)^h$

D $n = 4 + \left(\frac{1}{2}\right)^h$

7. The amount of fertilizer in a landscaping company's warehouse decreases at a rate of 3% per week. The amount of fertilizer in the warehouse was originally 78,000 cubic yards.

Which function models the amount of fertilizer in cubic yards left after w weeks?

A $f(w) = 0.97(78{,}000)^w$

B $f(w) = 1.03(78{,}000)^w$

C $f(w) = 78{,}000(0.97)^w$

D $f(w) = 78{,}000(1.03)^w$

Geometry

Name : _____ Score : _____

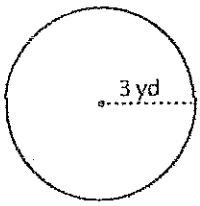
crusell@mpisd.net dwoods@mpisd.net

Radius Easy: S1

Circle - Circumference

ohernandez@mpisd.net hcampbell@mpisd.net

Example :



Circumference of a circle = 2πr

Radius (r) = 3yd

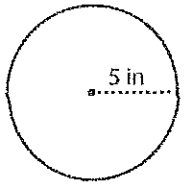
Circumference = 2πr

= 2 x π x 3

Circumference = [illegible] = 18.85 yd

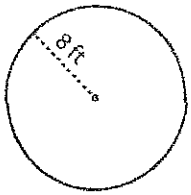
Find the exact circumference of each circle.

1)



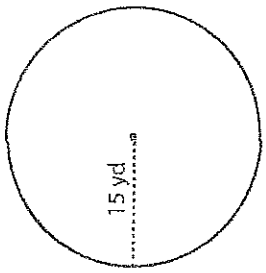
Circumference = _____

2)



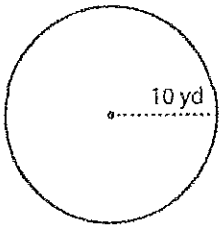
Circumference = _____

3)



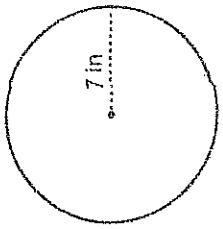
Circumference = _____

4)



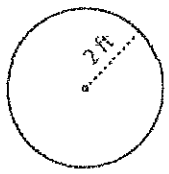
Circumference = _____

5)



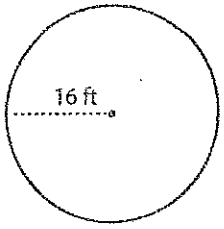
Circumference = _____

6)



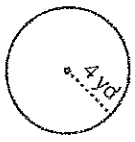
Circumference = _____

7)



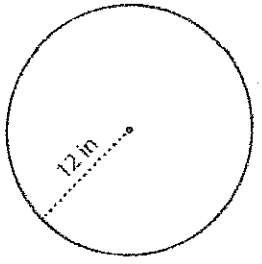
Circumference = _____

8)



Circumference = _____

9)



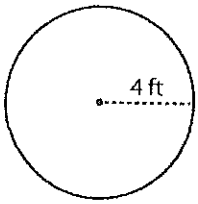
Circumference = _____

Name : _____ Score : _____

Circle - Area

Radius Easy: S1

Example :



Area of a circle = πr^2

Radius (r) = 4 ft

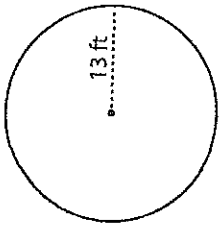
Area = πr^2

= π x 4 x 4

Area = 16π ft^2

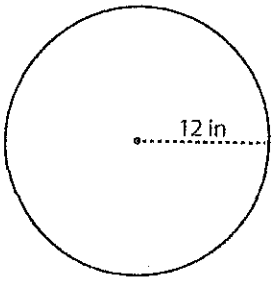
Find the exact area of each circle.

1)



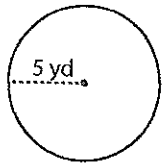
Area = _____

2)



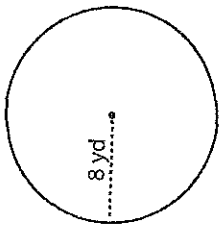
Area = _____

3)



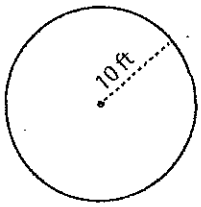
Area = _____

4)



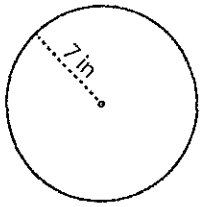
Area = _____

5)



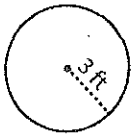
Area = _____

6)



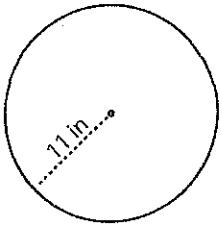
Area = _____

7)



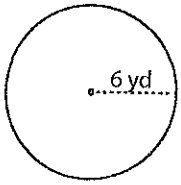
Area = _____

8)



Area = _____

9)



Area = _____

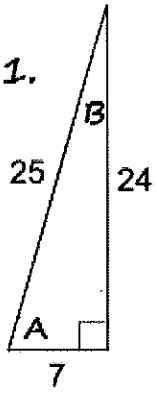
Coach Woods and Mr. Morris

Math Models Week 5

Trig Review

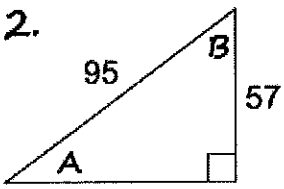
Fill in the charts below for the following triangles:

1.



	Angle A	Angle B
Sin		
Cos		
Tan		
	°	°

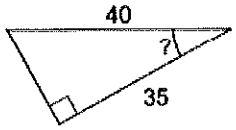
2.



	Angle A	Angle B
Sin		
Cos		
Tan		
	°	°

Find the measure of the missing angle:

3)



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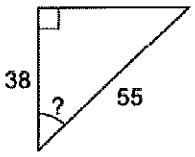
4)



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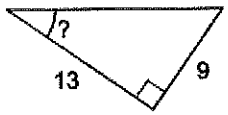
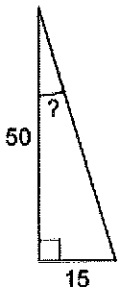
5)



_____

6)



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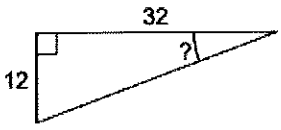
7)



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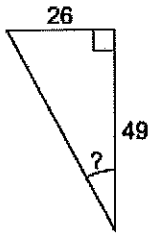
8)



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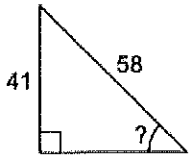
9)



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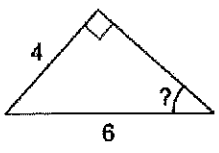
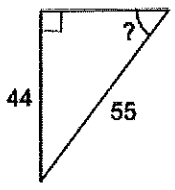
10)



_____

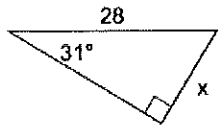
11)



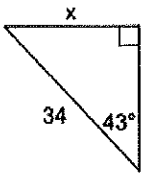
_____

Find the measure of the missing side:

12)



13)



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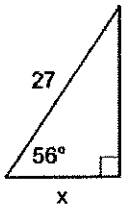

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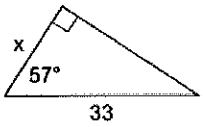

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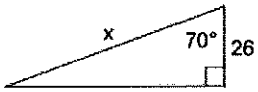

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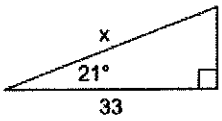

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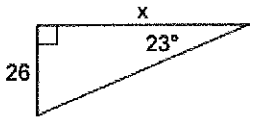
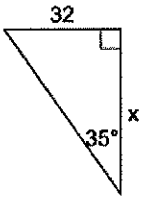
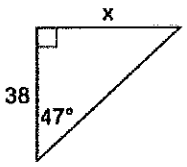


19)



20)



*Key on REMIND Math Models class

Algebra 2 and Pre-Cal

Discriminant

From the quadratic formula $= \frac{-b \pm \sqrt{b^2-4ac}}{2a}$, the part under the square root symbol "$b^2 - 4ac$" is called the **discriminant**.

By examining the discriminant, you can get information about the solutions.

What does the discriminant tell you about the solutions?

Discriminant	Nature of Solutions	Relation of Graph to x-axis
$b^2 - 4ac > 0$ & is a perfect square	2 real rational roots	Crosses x-axis twice
$b^2 - 4ac > 0$ & is NOT a perfect square	2 irrational roots	Crosses x-axis twice
$b^2 - 4ac = 0$	One real rational number	Tangent to x-axis (touches x-axis once)
$b^2 - 4ac < 0$	2 complex conjugates	Does not cross x-axis

Use the discriminant to tell the nature of the solutions:

1. $2x^2 + 7x + 6 = 0$

a=2 b=7 c=6

b^2-4ac

$7^2-4(2)(6)$

$49-48$

1 ← perfect and square

70

2 real rational roots

2. $3x^2 - 5x - 6 = 0$

a=3 b=-5 c=-6

b^2-4ac

$(-5)^2-4(3)(-6)$

$25+72$

97 ← not a perfect square and 70

2 irrational roots

3. $x^2 - 8x + 16 = 0$

a=1 b=-8 c=16

b^2-4ac

$(-8)^2-4(1)(16)$

$64-64$

0

one real rational number

Describe how the graph of each function is related to the x-axis:

1. $y = 2x^2 - 3x - 7$

a=2 b=-3 c=-7

b^2-4ac

$(-3)^2-4(2)(-7)$

$9+56$

65

crosses x-axis twice

2. $y = 4x^2 + 5x + 2$

a=4 b=5 c=2

b^2-4ac

$5^2-4(4)(2)$

$25-32$

-7

does not cross x-axis

Name: _____

Discriminant Homework

Use the discriminant to determine the nature of the solutions.

1. $x^2 + 6x + 6 = 0$

2. $x^2 - 4x + 8 = 0$

3. $2x^2 + x - 28 = 0$

4. $x^2 - 12x + 36 = 0$

5. $2x^2 + 2x + 8 = 0$

6. $x^2 + 3x - 14 = 0$

Describe the relation of the graph of each function to the x-axis.

7. $y = x^2 + 3x + 5$

8. $y = 4x^2 - 3x - 9$

9. $y = x^2 + 12x - 18$

10. $y = x^2 - 12x + 25$

Wbarkley@mpisd.net

Analyzing Numerical Data: Using Ratios

Name_____Period_____ AQR, Monday, April 20, 2020

Changing Tire Sizes

Use these videos as reference: https://youtu.be/EaxvrcThiD4 and https://youtu.be/XLE7dxA1GRI

You just bought a Chevrolet Silverado 2500. It came with tires that were marked 245/75R16. Your friend wants you to put new tires on your truck to 285/55R20.

Tire	245/75R16	285/55R20
Width in mm and in inches		
Aspect Ratio in %		
Height in inches		
Diameter in inches		
Circumference in inches		

After one rotation of the wheel, the truck with the larger tires has traveled _____ times further than the truck with the original tires.
Show work rounded to 4 decimal places. k= _____

You change to the new tires but now you find you have problems. Your odometer says you have traveled 10,000 with the new tires but how far have you really driven? Show work.

You are going through the school zone and your speedometer reading is 20. How fast were you really going? Show work rounded to the nearest whole number.

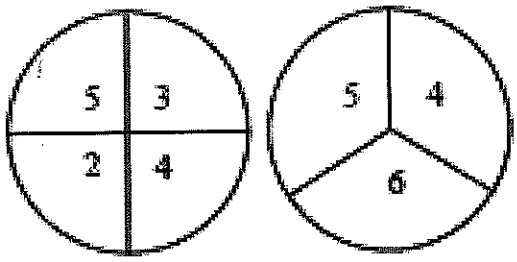
You are driving through town were the speed limit is 35. Even though your speedometer reading is 35, how fast are you really going? Show work rounded to the nearest whole number.

You are driving on the interstate. Your speedometer reading is 75 but how fast are you really going? Show work rounded to the nearest whole number.

What problems can you think could happen due to these differences?

Counting Principle & Intro to Probability

Cynthia is planning a party. For entertainment, she has designed a game that involves spinning two spinners. The spinner with four possible outcomes gets spun first, and the spinner with three outcomes gets spun second. Assume all the sections in each spinner are the same size. If the spinner lands on a line it will be spun again.



a. Use the Fundamental Counting Principal to give the total possible outcomes for this scenario?

b. Draw a tree diagram to show the different outcomes for spinning both spinners.

c. Give the sample space for this spinner scenario.

d. What are the events in this scenario?

e. What are the outcomes in this scenario?

f. If both spinners are spun once, what is the probability that the sum of the two spinners is ten?

Dual Credit Algebra II Mrs. Russell

Info for at Home Assignments

Week 5

Hi guys! I hope everything went well last week. All of our assignments will now be located in MyMathLab. You will need to be sure that you are checking MML, Remind, and your email (the one that you set up in MML for our communications) REGULARLY for messages for me. Please be sure that you are watching the deadlines for your assignments.

Have a great week! Stay healthy!

Mrs. Russell

AP Statistics Mrs. Russell

Info for at Home Assignments

Week 5

Hi guys! I hope everything went well last week. I will be sending your assignments this week and all following weeks on Remind and on your email. Please be sure to check both places regularly for messages from me.

Have a great week! Stay healthy!

Mrs. Russell