Algebra 2 Bellwork Monday, June 13, 2016

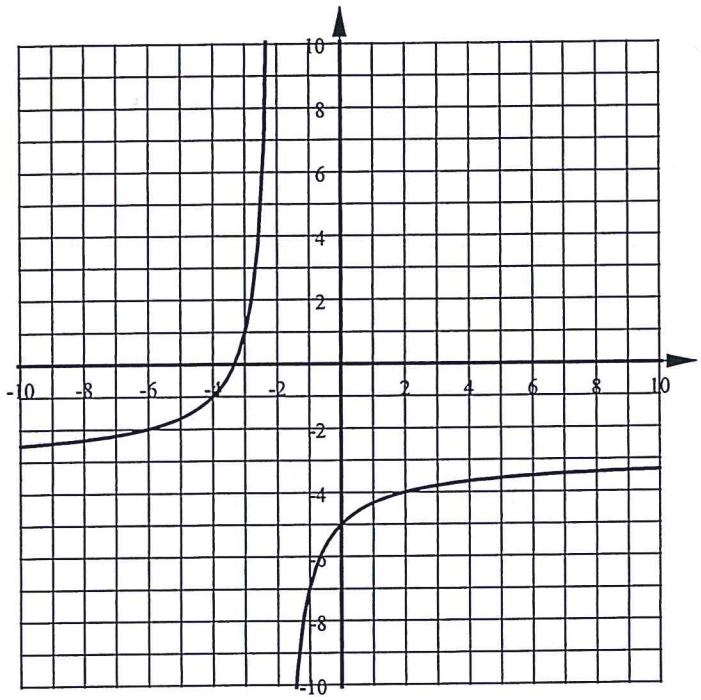
1. Use this set of 20 numbers: $11, 13, 18, 19, 20, 20, 27, 31, 33, 34, 34, 34, 38, 42, 46, 47, 49, 53, 55, 59$

a) 34 is at what percentile?

b) What number is at the 80th percentile?

2. on the kitchen table are 5 pieces of fruit, 4 kinds of drinks, and 3 kinds of chips. You want to take some snacks camping this weekend.
How many ways can you take 2 drinks, 1 chip, and 3 pieces of fruit.

3. Write the equation of the graph shown which is a transformation of the equation $y = \frac{4}{x}$



4. Write this in radical form: $5G^{\frac{4}{7}}$

5. Find each probability as a fraction.

	Pie	Cake	Cookies	Total
Child	18	20	13	51
Adult	7	36	5	48
Total	25	56	18	99

1. P(Child and Cake)

2. P(Adult or Pie)

3. P(Cookie | Child)

4. P(Adult | Cake)

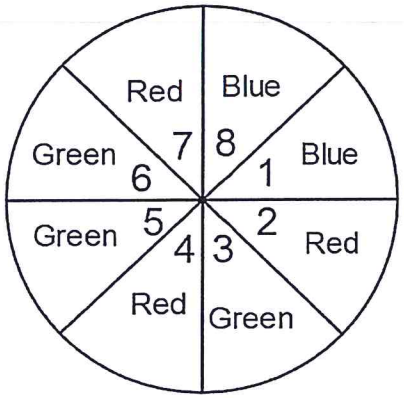
6. A survey of 560 people showed that 376 own their car.

a. Find the sample proportion to the nearest whole number.

b. Find the margin of error and use it to give an interval that is likely to contain the actual population proportion of people that own their own car.

7. Simplify each. a) $(5+2\sqrt{6})(3-4\sqrt{6})$ b) $5\sqrt{12}-6\sqrt{27}+2\sqrt{300}$

8. You will spin this once. Find each probability as a fraction.

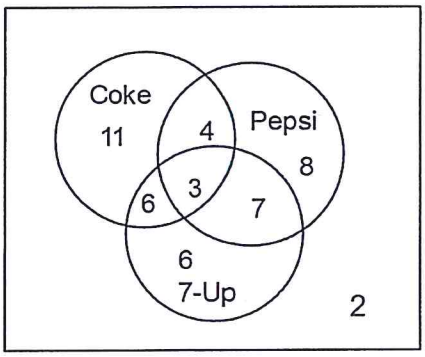


a. P(Green and Odd)

b. P(Blue or Multiple of 4)

c. P(Red and Factor of 15)

9. Find each probability as a fraction.

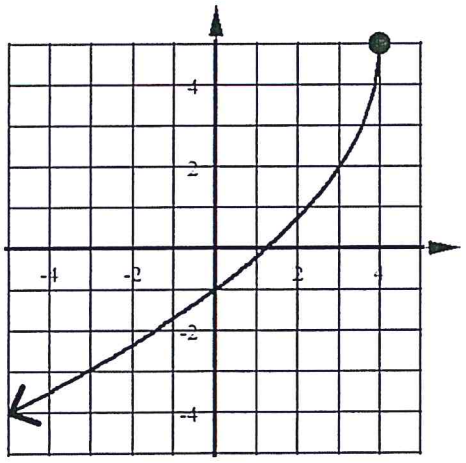


a. P(Pepsi and 7-Up)

b. P(Coke but not Pepsi)

c. P(Not 7-Up)

10. Write the equation of this graph.



Algebra 2 Bellwork Monday, June 13, 2016 Answers.

1. Use this set of 20 numbers: 11, 13, 18, 19, 20, 20, 27, 31, 33, 34, 34, 34, 38, 42, 46, 47, 49, 53, 55, 59

a) 34 is at what percentile?

$\frac{9}{20}$ = 45th percentile

b) What number is at the 80th percentile?

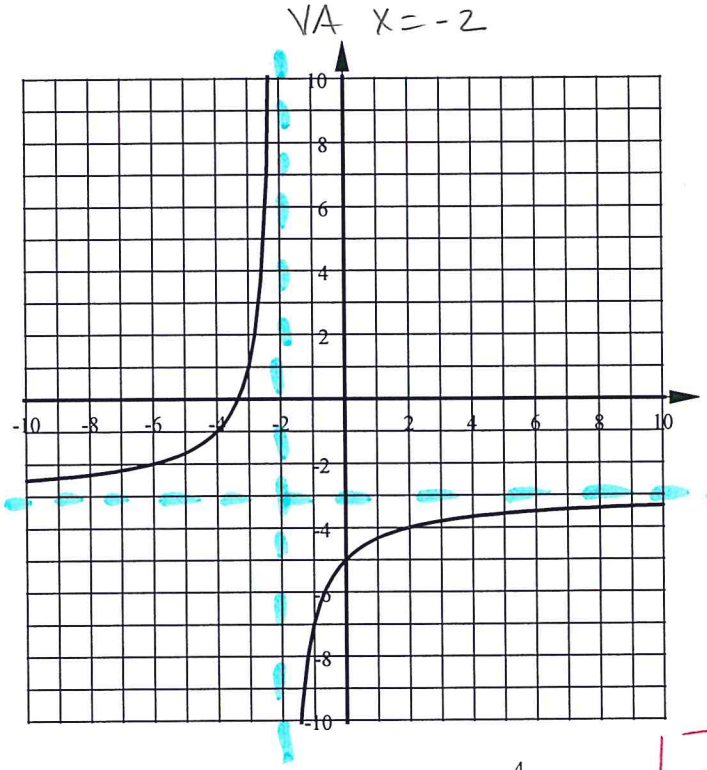
(.80)(20) = 16 → 49

2. on the kitchen table are 5 pieces of fruit, 4 kinds of drinks, and 3 kinds of chips. You want to take some snacks camping this weekend.

How many ways can you take 2 drinks, 1 chip, and 3 pieces of fruit.

$_4C_2 \cdot {}_3C_1 \cdot {}_5C_3 = 6 \cdot 3 \cdot 10 = 180$

3. Write the equation of the graph shown which is a transformation of the equation $y = \frac{4}{x}$



2 Left 3 down
x-axis Refl.

$y = \frac{-4}{x+2} - 3$

4. Write this in radical form: $5G^{\frac{4}{7}}$

$5\sqrt[7]{G^4}$ or $5(\sqrt[7]{G})^4$

5. Find each probability as a fraction.

	Pie	Cake	Cookies	Total
Child	18	20	13	51
Adult	7	36	5	48
Total	25	56	18	99

1. P(Child and Cake) $\frac{20}{99}$
2. P(Adult or Pie) $\frac{66}{99}$
3. P(Cookie | Child) $\frac{13}{51}$
4. P(Adult | Cake) $\frac{36}{56}$

6. A survey of 560 people showed that 376 own their car.

a. Find the sample proportion to the nearest whole number. $\frac{376}{560}$ = 67%

b. Find the margin of error and use it to give an interval that is likely to contain the actual population proportion of people that own their own car. $\frac{1}{\sqrt{560}} \times 100 \pm 4\%$ → 63% to 71%

7. Simplify each. a) $(5+2\sqrt{6})(3-4\sqrt{6})$

	5	$+2\sqrt{6}$
3	15	$+6\sqrt{6}$
$-4\sqrt{6}$	$-20\sqrt{6}$	$-8\cdot 6 = -48$

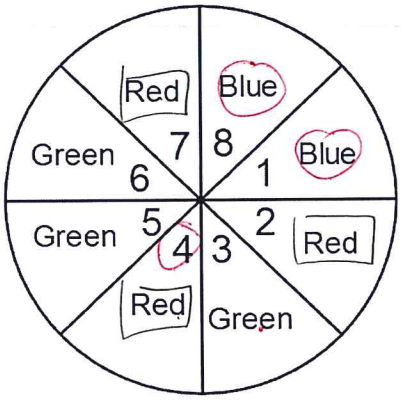
$= -33 - 14\sqrt{6}$

b) $5\sqrt{12} - 6\sqrt{27} + 2\sqrt{300}$ ($4\cdot 3$, $9\cdot 3$, $100\cdot 3$)

$10\sqrt{3} - 18\sqrt{3} + 20\sqrt{3}$

$= 12\sqrt{3}$

8. You will spin this once. Find each probability as a fraction.

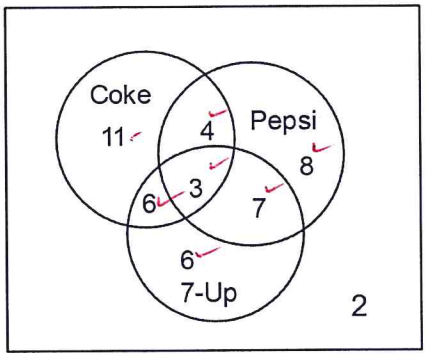


a. P(Green and Odd) = $\frac{2}{8}$

b. P(Blue or Multiple of 4) = $\frac{3}{8}$

c. P(Red and Factor of 15) = $\frac{0}{8}$

9. Find each probability as a fraction. TOTAL = 47

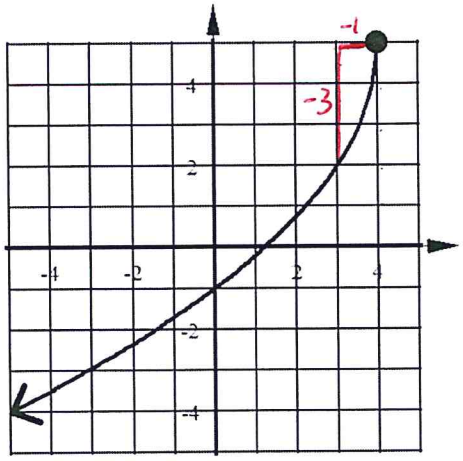


a. P(Pepsi and 7-Up) = $\frac{10}{47}$

b. P(Coke but not Pepsi) = $\frac{17}{47}$

c. P(Not 7-Up) = $\frac{25}{47}$

10. Write the equation of this graph.



4 RIGHT
5 up
upside down
backwards
Vert stretch factor = 3

$y = -3\sqrt{-(x-4)} + 5$