

December 17, 2018 Monday $(x-h)^2 + (y-k)^2 = r^2$

1) What is the center and the radius of the circle whose equation is $(x+3)^2 + y^2 = 12$
 $C: (-3, 0)$ $R: r = \sqrt{12} = 3.5$

2) Convert the following to slope-intercept form of a line: $y = mx + b$
 $-3x + 6y = 18$
 $+3x +3x$
 $6y = 3x + 18$
 $y = \frac{3}{6}x + \frac{18}{6}$
 $y = \frac{1}{2}x + 3$

3) Use the following function:
 $f(x) = 2x^2 + 8x - 24$
 $f(6) = 2(6)^2 + 8(6) - 24$
 $f(6) = 72 + 48 - 24$
 $f(6) = 96$

Your semester exam is Wednesday!

Dec 13-3:35 PM

Geometry - Final Review May 2017

1. $x + y = 20$
 Center: _____ Radius: _____

2. $(x-5)^2 + (y+2)^2 = 16$
 Center: _____ Radius: _____

Convert the following circle equations to general form $Ax^2 + By^2 + Cx + Dy + E = 0$
 3) $(x-9)^2 + (y+2)^2 = 64$ 4) $x^2 + 6y + 2y^2 = 26$ 4) $x^2 + 6y + 2y^2 = 26$ 4) $x^2 + 6y + 2y^2 = 26$

5. A circular disk drive has a diameter with endpoints at $(0, 0)$ and $(8, 0)$. Find the center and radius of the disk drive. Write the equation of the circle in standard form.

6. Find the point that partitions the line segment in a 1:1 ratio with the endpoints $(0, 4)$ and $(-3, -7)$.

7. Find the perimeter of the triangle with the vertices $(-3, 2)$, $(1, -5)$, and $(5, 4)$. Using the distance formula: $d = \sqrt{(x_2-x_1)^2 + (y_2-y_1)^2}$

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$Ax^2 + By^2 + Cx + Dy + E = 0$ $(x-h)^2 + (y-k)^2 = r^2$

Change the following equations to general form:
 8) $(x-4)^2 + (y-3)^2 = 9$
 $(x-4x-4) + (y-3y-3) = 9$
 $C: (-3, -8)$ $R: 5$

Find a radius of a circle that passes through the point $(0, 20)$ from circle C . Show your work.
 $(-3)^2 + (y-4)^2 = 5^2$
 $(-3)^2 + (y-4)^2 = 25$
 $(-3)^2 + (6)^2 = 25$
 $9 + 36 = 25$
 $45 = 25$
 NO

U-Union
 n-Intersection

1. List the outcomes (also known as the sample space) for A, B, C.
 G, A, D, T, L

2. List the outcomes for A, B, C.
 G, A, K, I, N, A, K

3. List the outcomes for A, B, C.
 G, A, K, I, N, A, K

4. Find $P(B)$ $\frac{3}{7}$ 5. Find $P(A \cap B)$ $\frac{5}{7}$ 6. Find $P(A \cup B)$ $\frac{1}{7}$

Probability (P) = $\frac{\text{favorable outcomes}}{\text{all outcomes}}$

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Change the following equations to general form.

8) $(x-4)^2 + (y-3)^2 = 9$
 $(x^2 - 4x - 4) + (y^2 - 3y - 3) = 9$
 $x^2 - 4x - 4 + y^2 - 3y - 3 = 9$
 $x^2 - 8x + 16 + y^2 - 6y + 9 = 9 + 4 + 3$
 $x^2 - 8x + 16 + y^2 - 6y + 9 = 16$
 $x^2 - 8x + 8 + y^2 - 6y = 0$
 $x^2 + y^2 - 8x - 6y + 8 = 0$

$Ax^2 + By^2 + Cx + Dy + E = 0$

Dec 17-10:45 AM

Term	Notation	Venn Diagram
Set C is a subset of set B if every element of C is also an element of B.	$C \subset B$	
The intersection of sets A and B is the set of all elements that are in both A and B.	$A \cap B$	
The union of sets A and B is the set of all elements that are in A or B.	$A \cup B$	
The complement of set A is the set of all elements in the universal set U that are not in A.	A^c or $\sim A$	

Dec 17-10:24 AM

14. Which of the following are mutually exclusive?
 A. Choosing a King or a Diamond in a deck of cards
 B. Choosing a hand student or math student in a classroom
 C. Rolling a 2 and getting an even sum or a sum less than 7
 D. Choosing Jack or 5 in a deck of cards

$P = \frac{\text{favorable outcome}}{\text{all outcome}}$

The sum of 2 dice

16. P(even sum or a sum greater than 9) $\frac{20}{36}$
 17. P(you less than 7 or a sum greater than 10) $\frac{16}{36}$
 18. P(odd sum or a sum less than 8) $\frac{21}{36}$

Calendar - A month is chosen from a year

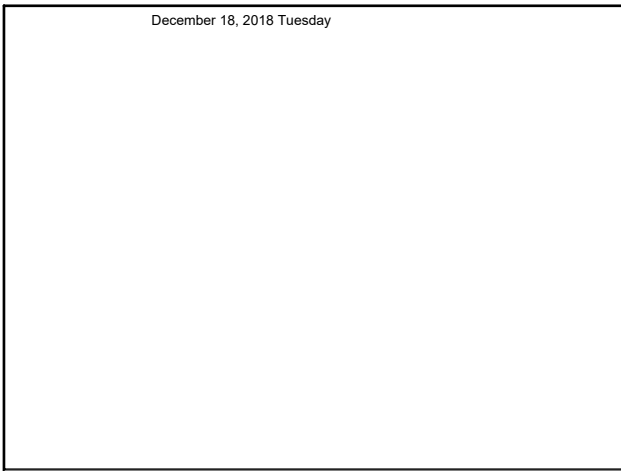
19. Find the probability of choosing a month that begins with a vowel. $\frac{5}{12} = \frac{5}{12}$
 20. Find the probability of choosing a month starting with the letter M or J. $\frac{2}{12} = \frac{1}{6}$
 21. Find the probability of selecting a month that begins and ends with a consonant.
 22. Find the probability of selecting a month that begins with a consonant and then selecting another month begins with a consonant (without replacement).
 23. Find the probability of choosing a month that starts with a vowel letter.

PE Class Survey of 100 Students

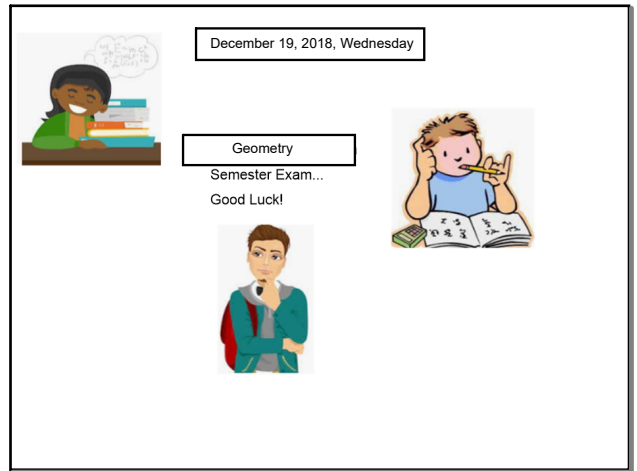
	Do you like PE?	
	Yes	No
Male	38	12
Female	31	19

24. Use the data in the table to decide if liking PE is independent of your gender.
 NO

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$(x-h)^2 + (y-k)^2 = r^2$ $P = \frac{\text{favorable outcomes}}{\text{all outcomes}}$
 $y = mx + b$
 $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
 $Ax^2 + By^2 + Cx + Dy + E = 0$
 $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$
 $m = \frac{y_2 - y_1}{x_2 - x_1}$

Formula Sheet!

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