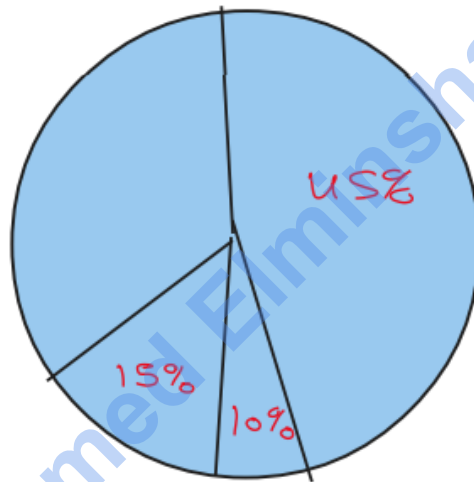# EST December 2024

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1. $if \sqrt[3]{4x^4y^3}$ Which of the following can be radicalized?
    a. x
    b. 2x
    c. 3c
    d. Can't be radicalized

Pie Chart representing a survey of 40 participants that were asked. How much did they consume snacks each evening?

2. The major result was chocolate, how many participants ate chocolate?
3. The number of participants who chose fruit was the least and the biscuits was their 2nd choice , what is the number of those who chose fruit and biscuits.
4. How to modify this study?
    a. should choose more teenagers in the participants.
    b. choose more participants because 40 is not enough sample.
    c. label the pie graph sectors.
    d.

5. 5 people bought one pizza that cost 12$, Ramzy will eat $\frac{1}{8}$ of the pizza , how much should he pay?

6. 5 people going to trips that cost 3625$, two of the five decided not to go so the total cost decreased b 20% and each one of them will contribute 250$
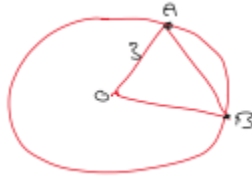How much should each one of the 3 people who will travel pay more because of the apology of these 2?

7. 2% annual increase made profit of 210.08$ after 2 years , what was the initial deposit?
A-5200
B-5300
C-5400
D-5600

8. Sum of 4 consecutive odd numbers with mean equal 14, what is the lowest of these numbers?
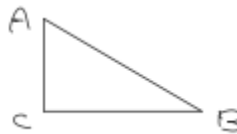A-11
B-13
C-15
D-17

9. What is the slope of the line perpendicular to the line 3y+x=2?

10. $343^{2x} = 49^{6x-1}$ and x = $\frac{1}{b}$ what is the value of $\frac{b}{3}$?

11. The length of arc AB is 2π, What is the measure of the major arc AOB?

12. Triangle ABC is right angle triangle at C, If AC =16 , $AC = \frac{AB}{2}$, What is the measure of $\sphericalangle ABC$?

13. What is true about this set of numbers? **{7,5,3,5,3,5,9,11,4,11,7,8}**

I Mean > Mode

II Range is sum $\frac{1}{2}$ mode and mean

III Mean > 5

        a. I only
        b I,II,III
        c. I,II
        d. II only

14. Which of the following must be true:

$$y = -6x^2 + 12x + 3$$

I concave up

II positive axis of symmetry

III has a minimum value

        a. II only
        b. I and II
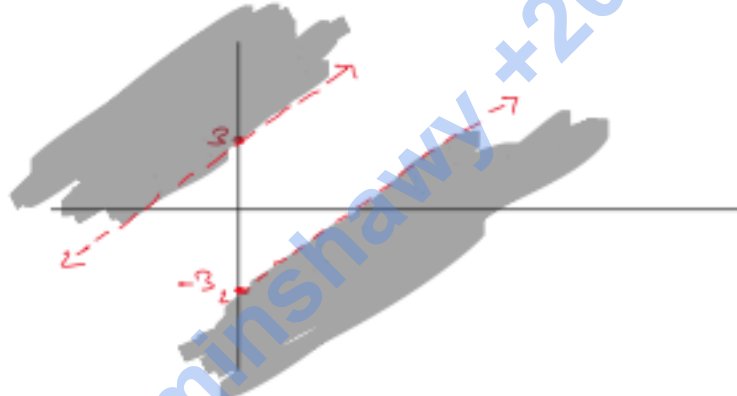   c. I only
        d. I,II, and III

The probability to rain is 0.22

15. What is the probability of it raining for 3 consecutive days ?

16. What is the probability of it raining on the first day then not raining on the second day ?

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17. $64(7x^2y^3) = 2^m n^2 x^4 y^6$ and $m \leq 4$, $m < n$ what is the value of $m + n$?

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18. What is the inequality that describes this graph?

    a. $|2x - y|>3$
    b. $|2x - y|<3$
    c. $|2x + y|>3$
    d. $|2x + y|<3$

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19. $if\ x = b^6\ and\ y = b^5,\ \ What\ is\ the\ value\ of\ (xy)^{12}$?