

Grade 9 Math's

3rd term revision question

Item I. Fill in the blank space with the correct answer

1. The longest chord in a circle is called _____
2. Part of circumference of a circle is called _____
3. Half the diameter is _____
4. An arc less than a semi circle is _____
5. An arc greater than a semi circle is _____

Item II. Work out show the necessary steps

6. In a circle of radius 10cm the length of a chord which is 8cm .Find far from the center.
7. In a circle if 3cm chord is 5cm from the center, the calculate the radius of the circle.
8. In a circle of radius 20cm, what is measure of the central angle subtended by 10π an arc?
9. In the figure if HI is 96 are FG is 36 are find m ($\angle$ HEI)

Note: the measure of the angle formed by the lines of two chords intersecting outside a circle is $\frac{1}{2}$ half the distance of measure of the arc they intercept.

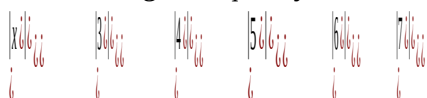
10. What is the radius of circle which is circumscribed about a right angled $\triangle ABC$, with legs $AC = 6\text{cm}$ & $BC = 8\text{cm}$
11. A chord of a circle 8cm long and it is 3cm from the center. What is the length of the radius.
12. In a circle of diameter 26cm it is 5cm from the center. Find the length of the chord.
13. Find the total surface area and volume of right rectangular prism in which the dimensions of the base are 5cm and 4cm the length of the altitude is 3cm
14. The lateral area of a right circular cylinder is $54\pi \text{ cm}^2$. If the total surface area is $72\pi \text{ cm}^2$ find the volume.
15. Find the total surface area & volume of right circular cylinder whose height and radius of the base are 2cm.
16. Measure of central tendency
 - The final maths test result of 5 students was 70,75,84,60,90 find the mean of the test result
 - μ (mu) for mean or $\bar{x}$.
 - $\sum x$ = sum of individual observation of variable
 - n = total number of observation
 - $\mu = \frac{\sum x}{n} = \frac{70+75+84+60+90}{5}$

Mean from frequency distribution table

- To find mean from frequency distribution table we can use formula

$$\mu = \frac{\sum x_i f_i}{\sum f_i}$$

17. The following is frequency distribution of a certain population find the mean



15 8 50 24 21

18. The height of 10 buildings to the nearest meter is given as follows 9,7,15,30,9,20,25,5,20,15 then find the mode.

✓ **Median**

- The number of observation is odd $md = \left(\frac{n+1}{2} \right)^{+2}$
- The number of observation is even $= \left(\frac{n}{2} \right)^{+1} + \left(\frac{n}{2} + 1 \right)^{+1/2}$

19. The height of 5 student in a class is 1.35m, 1.45m, 1.50m, 1.60m and 1.65m .Find the median

20. The following is a frequency distribution of population fun V find the media

V	2	3	5	8	10	12
F	3	4	7	5	8	1

Meas deviations

$$\frac{\sum (x - \bar{x})}{N} \quad \text{where } \bar{x} \text{ or } N = \text{mean}$$

N = total number of observation

20. Consider the following observations 2 ,5,6,7,10 and find mean deviation from mean

- 21 .The daily average temperature of town was registered for a week as follows, 13°C,20°C ,15°C,7°C,19°C,30°C,22°C. what is the range?

Standard deviation

- To find standard deviation for a given set of data
 - i. Find the mean for the given set of data
 - ii. Find the M.D from the mean for each value
 - iii. Square each deviation
 - iv. Find the mean of the square deviations
(which is called variance)

Find the standard deviation of the following data which show the 5 days, 5,7,9,13&16

- 22 If you toss a die & observed the number appearing on the upper face of the die, the what is probability to see an odd number?

Sample space = {1,2,3,4,5,6}

Event (E) = {1,3,5}

P(E) number of event/total number sample space

$$P(E) = \frac{3}{6} = \frac{1}{2} = 0.5$$

- 23 If we toss three coins and observe the sequences can of heads a tails them what is the probability

- a. To see exactly 2 heads?
- b. To see head in succession?
- c. To see at last 2 tails?