



MATHS

BOOKS - UNITED BOOK HOUSE

Model Test Set - 9



1. Step diagram is used for presenting.

A. Attributes

B. Continuous variables

C. Discrete variable

D. none of these

Answer:

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2. In a frequency curve of scores, the mode was found to be higher than the mean. This shows that the distribution is

A. symmetric

B. negatively skewed

C. positively skewed

D. normal

Answer:

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3. A.M., G.M., and H.M. in any series are equal

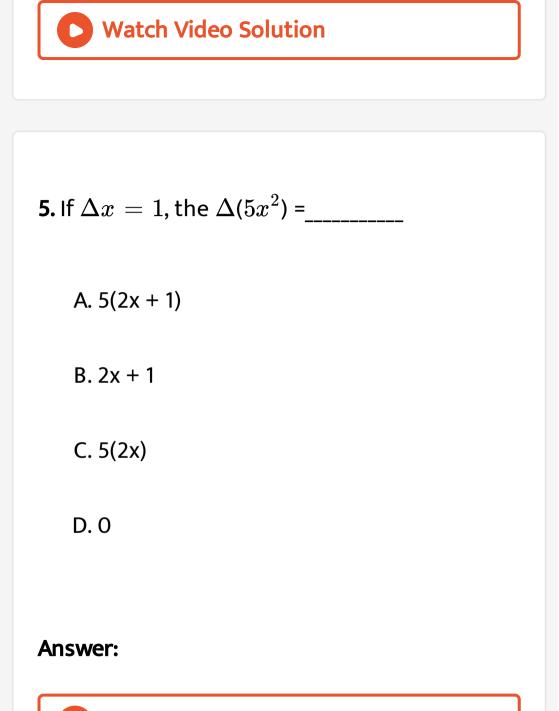
when

- A. a) the distribution is symmetric
- B. b) all the values are same
- C. c) the distribution is positively skewed
- D. d) the distribution is unimodal

Answer:

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4. The column diagram is appropriate for exhibiting the frequency distribution of family size. (write true or false)



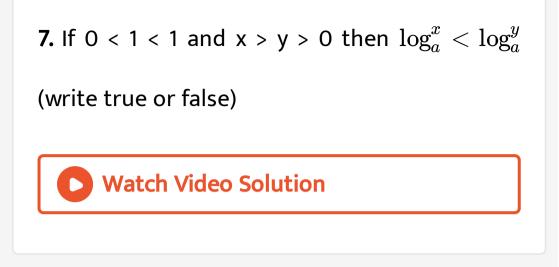
6. When $\left(x^5-1
ight)$ is divided by (2x + 1), then the remainder is

A.
$$\frac{33}{32}$$

B. $(-)\frac{33}{32}$
C. $(-)\frac{33}{32}$
D. $\frac{32}{33}$

Answer:





8. If $a\equiv b$ (mod n), then $a^3\equiv b^3$ (mod n)

(write true or false).



9. The probability of drawing any one spade

card from a pack of card is

A.
$$\frac{1}{52}$$

B. $\frac{1}{13}$
C. $\frac{4}{13}$
D. $\frac{1}{4}$

Answer:

10. A single letter is selected at random from the word probability. The probability that it is a vowel is

A.
$$\frac{3}{11}$$

B. $\frac{2}{11}$
C. $\frac{4}{11}$

D. 0

Answer:



11. Let x be a variable assuming values x_1 , x_2 ,..... x_n state the condition when AM(x) = GM(x) = HM(x)



12. If the value of a variable are 4, 4, 3, 3, 4, 1, 2

then find the value of mode and median.



13. If wrong correct the statement: mode can

be obtained from ogive

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14. If x=5 find the value of the algebraic expressions: $x^3 + 8$.

15. If all the values of a variable are equal to 7

then what is its variance.

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16. P(A) = 1/2, P(B) = 2/3, what will be the least value of $P(A \cap B)$.

17. A-set contains 4 elements. It's power set will contain _____ element.
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18. Draw venn diagram to represent the

following set : $(A \cup B) - C$.

19. Draw Venn diagram to represent the following sets AB^c



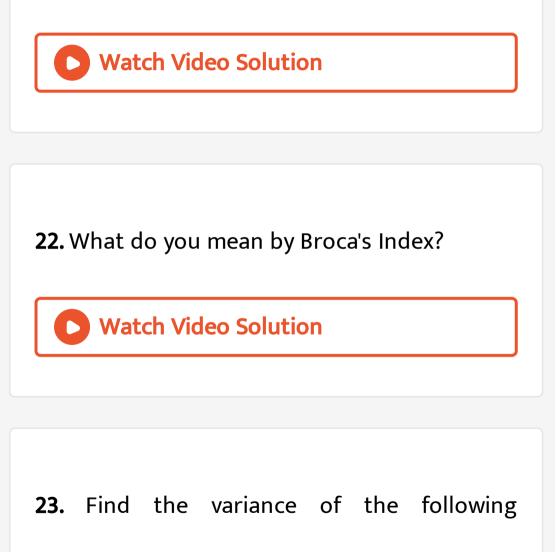
20. Let A and B be two events such that P(A) =

0.3 and $P(A \cup B) = 0.8$. If A and B are

independent events then P(B) = ?

21. Discuss about different sources of data on

vital events.



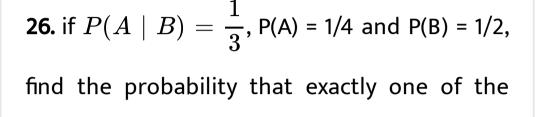
observations : 30, 40, 50, 60, 70.



24. Let there be two sets of observations. The first set contains 10 observations with mean 20. The second set contains 20 observations with mean 25. Find the mean of the combined set.

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25. Distinguish between primary and secondary data.



events A and B occurs.



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27. If P(A) = 0.2, P(B) = 0.3, P(C) = 0.4 and A, B

and C be independent then $P(ABC^c)$ = ?

28. Write the axiomatic definition of probability?

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29. Sum of the squares of deviation is least

about

30. What do you mean by a cumulative frequency distribution. Point out its special advantages and uses.



31. What is the value of Sheppard's correction

of moments for m_4 ?

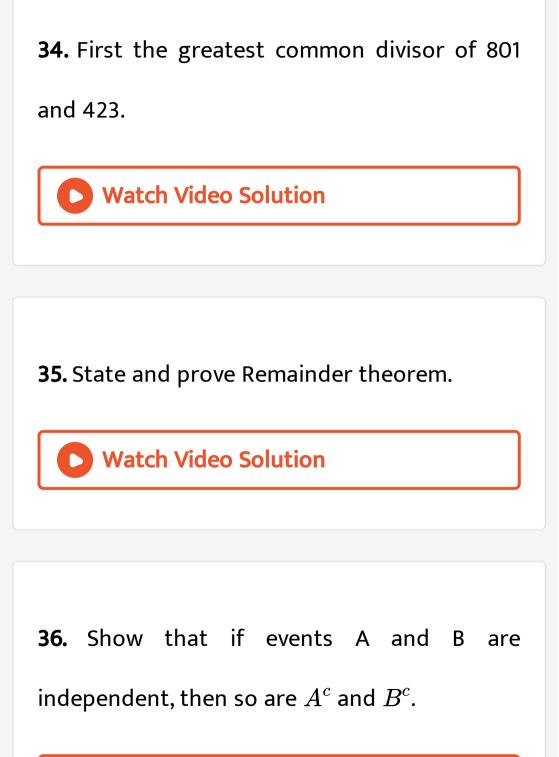


32. For three unequal positive real numbers a,

b, c show that (b + c) (c + a) (a + b) > 8abc.



33. If
$$x_1, x_2, \dots, x_n$$
 are real quantities. Prove
that $\frac{1}{n} \sum_{i=1}^n xi^2 \ge \left(\frac{1}{n} \sum_{i=1}^n |xi|\right)^2$
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37. A Box contains 5 white and 3 black ball. One ball is drawn and it is seen to be white. A second ball is drawn without returning the first ball. What is the probability that the second ball is also white?

38. A box contains 7 white and 5 black balls two are drawn at random find the probability that they are not of the same colour when

the balls are drawn at a time



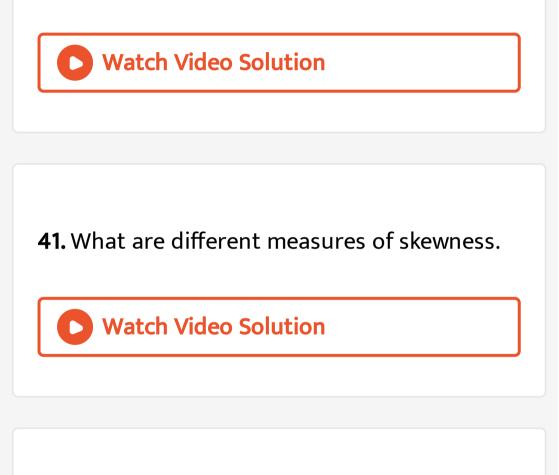
39. Define crude birth rate and point out its

defects.



40. Explain the Time reversal and Factor

reversal tests of index numbers.



42. Let x be a variable assuming the values 1, 2,.....k and let $F_1 = n$, F_2 ,.... F_k be the

corresponding cumulative frequencies of the

greater than type show that $ar{x} = rac{1}{n}\sum_{i=1}^k F_i.$

43. Suppose that all the four possible outcomes e_1 , e_2 , e_3 , e_4 of an experiment are equally likely. Define the events A, B, C as $A = (e_1, e_4), B = (e_2, e_4)$. What can you say about the dependence or independence of events A, B, C?

44. Prove that Fisher's ideal index number lies

between Laspeyre's and Paasche's index

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45. Define standardised death rate. Discuss the

direct method of standardisation.

