

- (1) Ans. c
- (2) Ans. d
Explanation:
When demand changes due to factor other than price, it is called increase/decrease in demand, which causes shift in the curve.
- (3) Ans. a
- (4) Ans. b
Explanation:
Point Method is used when there are small changes in price.
- (5) Ans. c
Explanation: The slope of budget line is equal to slope of price line i.e. $P_x : P_y = \left\{ \frac{P_x}{P_y} \right\}$
- (6) Ans. c
Explanation:
At the zero level of output, the values of TC and TFC are equal to each other.
- (7) Ans. b
Explanation:
 M_3 is broad money which includes time deposits of bank while M_1 does not include.
- (8) Ans. d
- (9) Ans. d
- (10) Ans. b
- (11) Ans. c
- (12) Ans. c
- (13) Ans. a
- (14) Ans. b
Explanation:
Since MC is having a extreme behaviour than AC.
- (15) Ans. a
Explanation:
In perfect competition identical product at a identical price is there.
- (16) Ans. b
Explanation:
The value of AFC never be zero due to TFC which always remains constant.

- (17) Ans. a
Explanation:
$$MR = AR \times \frac{e-1}{e}$$
 - (i) $e = 1$; MR = 0
 - (ii) $e > 1$; MR = Positive
 - (iii) $e < 1$; MR = Negative
- (18) Ans. c
Explanation: In monopoly market, due to non-existence of substitutes, a firm always get Abnormal Profit.
- (19) Ans. c
Explanation: HDI is generally used which is the composite of three basic indications of human-development-longevity knowledge and standard of living.
- (20) Ans. d
Explanation: NABARD – National Bank of Agriculture and Rural Development.
- (21) Ans. a
Explanation:
Quantitative Restrictions were removed on 714 items in EXIM policy of 2000 – 01 and on remaining 715 items in EXIM policy of 2001 – 02.
- (22) Ans. b
Explanation:
Government announced the nationalization of 14 commercial banks in 1969 and 6 more banks were nationalised in 1980. Two banks were merged in 1993. So at present there are 19 nationalised banks.
- (23) Ans. c
Explanation:
Because of lesser/no substitutes.
- (24) Ans. c
- (25) Ans. b
- (26) Ans. a
- (27) Ans. d
Explanation:
This concept was given by Prof. Jacob Viner. According to him, " The work of an economist is only to make principles which are related with economical conditions of country."
- (28) Ans. a
Explanation:
Since in short run when fix factors are kept fixed and units of variable factors are increased this law is applicable.

(29) Ans. b
 Explanation:
 AFC can never be "U" shaped because TFC is fixed and when units of quantity are increased, AFC reduces but never increases.

(30) Ans. a
 Explanation:
 Because $AFC = \frac{TFC}{Q}$
 $TC = 250 + 10Q$
 Hence 250 is fixed cost & 10Q is variable cost
 Hence

$$AFC = \frac{TFC}{Q}$$

$$AFC = 250/Q$$

(31) Ans. b

(32) Ans. c
 Explanation:
 Wheat, rice, bajra, jawar and maize.

(33) Ans. a

(34) Ans. a

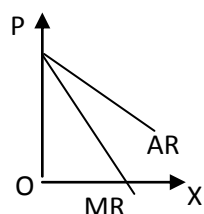
(35) Ans. a

(36) Ans. b

(37) Ans. a

(38) Ans. a

(39) Ans. a
Explanation:
 In monopoly AR is above the MR curve is



(40) Ans. c
 Explanation:
 Because price discrimination is not possible in perfect competition. In this industry are price maker and firms are price taker and they have to follow the price decided by industry. It is only possible in monopoly and monopolistic competition.

(41) Ans. b

- Explanation:
As shut down is the point where firm could not able to recover its average variable cost.
- (42) Ans. a
Explanation:
As MC is additional cost incurred due to production of an additional unit .
- (43) Ans. c
Explanation:
P.C. Mahalanobis focused on set up of capital goods.
- (44) Ans. b
Explanation:
PPC is a curve which shows combinations of two goods which can be produced with the given resources & technology.
- (45) Ans. b
Explanation:
Two ICs can never intersect each other.
- (46) Ans. c
Explanation:
A rational producer always operates in the II stage i.e. diminishing returns.
- (47) Ans. c
Explanation:
Both the costs are recognized in accounting process
- (48) Ans. a
Explanation:
Since if price of petrol increases quantity demanded of car goes down hence cross elasticity is negative.
- (49) Ans. c
Explanation:
Because price of tea ↑
And due to this
Qd of coffee also ↑
Hence the cross elasticity is positive
- (50) Ans. b
Explanation:
Because income elasticity of luxury goods is $e > 1$ and
- $$E_i = \frac{\% \text{ change in demand}}{\% \text{ change in income}}$$
- $$E_i = \frac{25}{20} = 1.25$$
- Which is $e > 1$
- (51) Ans. d
Explanation:

$$x = \sqrt{a^3 \sqrt{bx}}$$

$$x^2 = a (bx)^{\frac{1}{3}}$$

$$x^2 = a b^{\frac{1}{3}} x^{\frac{1}{3}}$$

$$x^{\frac{5}{3}} = a b^{\frac{1}{3}}$$

$$x = \sqrt[5]{a^3 b}$$

(52) Ans. c

Explanation:

The equation passing through $(-1, 3)$ and parallel to the line joining $(6, 3)$ and $(2, -3)$ is:

$$y-3 = \frac{-3-3}{2-6}(x+1)$$

$$y-3 = \frac{3}{2}(x+1)$$

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

$$\therefore 3x-2y+9=0$$

(53) Ans. b

Explanation:

Let first instalment be Rs. a and difference of consecutive instalments be Rs. d .

$$\frac{30}{2}[2a + 29d] = 3600 \times \frac{2}{3}$$

$$\Rightarrow 2a + 29d = 160 \quad \text{_____ (i)}$$

$$\text{and } \frac{40}{2}[2a + 39d] = 3600$$

$$\Rightarrow 2a + 39d = 180 \quad \text{_____ (ii)}$$

on solving equation (i) and (ii), we get

$$a = 51 \text{ and } d = 2$$

\therefore first instalment = Rs.51

(54) Ans. c

Explanation:

$$\int \frac{8^{1+x} + 4^{1-x}}{2^x} dx$$

$$= \int \frac{2^{3x+3} + 2^{2-2x}}{2^x} dx$$

$$= \int (2^{2x+3} + 2^{2-3x}) dx$$

$$= \frac{2^{2x+3}}{2 \log 2} + \frac{2^{2-3x}}{(-3) \log 2} + c$$

$$= \frac{2^{2x+3}}{2 \log 2} - \frac{2^{2-3x}}{3 \log 2} + c$$

(55) Ans. c

Explanation:

$$N_{12} = \{12, 24, 36, 48, \dots\} \text{ and } N_8 = \{8, 16, 24, \dots\}$$

$$N_8 \cap N_{12} = \{24, 48, \dots\} = N_{24}$$

(56) Ans. d

Explanation:

$$P \left(1 + \frac{r}{100} \right)^2 - P - \frac{2Pr}{100} = 40$$

$$P \left(\frac{R}{100} \right)^2 = 40 \dots \dots \dots (i)$$

$$P \left(1 + \frac{r}{100} \right)^3 - P - \frac{3Pr}{100} = 122$$

$$P \left(\frac{R}{100} \right)^2 \left(\frac{300+R}{100} \right) = 122 \dots \dots \dots (ii)$$

By solving eqⁿ(i) and eqⁿ(ii)

$$R = 5\%$$

$$\text{From eq}^n(i) \quad P \left(\frac{5}{100} \right)^2 = 40$$

$$P = \text{Rs. } 16000$$

(57) Ans. a

Explanation:

Formula : Internal division

$$\left(\frac{mx_2 + nx_1}{m+n}, \frac{my_2 + ny_1}{m+n} \right)$$

2 : 3

$$\frac{A(2,3) \quad R \quad B(3,7)}{2:3}$$

$$R \left(\frac{6+6}{5}, \frac{14+9}{5} \right) \Rightarrow R \left(\frac{12}{5}, \frac{23}{5} \right)$$

(58) Ans. c

Explanation:

Let a and d be the first term and common difference of the AP.

$$\therefore a + 58d = 449 \quad \text{---(i)}$$

$$a + 448d = 59 \quad \text{---(ii)}$$

on solving Equations (i) and (ii), we get

$$a = 507 \text{ and } d = -1$$

Now, assume that nth term will be zero.

$$0 = 507 + (n-1)(-1)$$

$$n-1 = 507$$

$$n = 508$$

(59) Ans. d

Explanation:

$$\lim_{h \rightarrow 0} \frac{e^{(x+h)^2} - e^{x^2}}{h} \left(\frac{0}{0} \right)$$

Using D'L Hospital Rule

$$= \lim_{h \rightarrow 0} e^{(x+h)^2} 2(x+h)$$

$$= 2xe^{x^2}$$

(60) Ans. c

Explanation:

$$SI = \frac{prt}{100}$$

$$60 = \frac{p \times 0.5 \times 1}{100}$$

$$p = \text{Rs.}12000$$

(61) Ans. d

Explanation:

$$\text{Required number of numbers} = 6 \times 6 \times 3 = 108$$

(62) Ans. d

Explanation:

$$x^y = e^{x+y}$$

$$y \log x = x + y$$

$$y = \frac{x}{\log x - 1}$$

$$\frac{dy}{dx} = \frac{\log x - 2}{(\log x - 1)^2}$$

(63) Ans. d

Explanation:

First nine terms of a G.P. are a, ar, ar^2, \dots, ar^8

$$P = a \cdot ar \cdot ar^2 \cdot \dots \cdot ar^8$$

$$= a^9 r^{36}$$

$$= (ar^4)^9$$

$$= (T_5)^9$$

= 9th power of the 5th term.

(64) Ans. d

Explanation:

An injective function means one-one. In option (d), $f(x) = -x$ for every value of x , we get a different value of f . Hence, it is injective.

(65) Ans. b

Explanation:

$$\left(\frac{21}{10}\right)^x = 2$$

$$x(\log 21 - \log 10) = \log 2$$

$$x = \frac{\log 2}{\log 3 + \log 7 - 1}$$

(66) Ans. a

Explanation:

$$\text{LHL} = 2$$

$$\text{RHL} = 4 - a$$

$$\text{LHL} = \text{RHL}$$

$$2 = 4 - a$$

$$a = 2$$

(67) Ans. d

Explanation:

$${}^{77}P_{31} = x, {}^{77}C_{31} = y$$

$$\frac{77!}{31!(77-31)!} = y$$

$${}^{77}P_{31} = 31!y$$

$$x = (31!)y$$

$$\therefore x > y$$

(68) Ans. d

Explanation:

$$\text{The required no. of ways} = 4! \times 3! = 144$$

(69) Ans. c

Explanation:

$$\begin{aligned} [(A \cup B) \cap C]' &= (A \cup B)' \cup C' \\ &= A' \cap B' \cup C' \end{aligned}$$

(70) Ans. d

Explanation :

Let the original salaries of Ravi and Sumit be Rs. $2x$ and Rs. $3x$,

$$\frac{2x + 4000}{3x + 4000} = \frac{40}{57}$$

$$\therefore 3x = 34000$$

$$\text{Sumit's present salary} = 3x + 4000$$

$$= 34000 + 4000$$

$$= \text{Rs. } 38000$$

(71) Ans: c

Explanation:

$$= 3000 \left(1 + \frac{10}{100} \right)^2 \left(1 + \frac{\frac{1}{3} \times 10}{100} \right) = 3751$$

$$\text{Interest} = 3751 - 3000 = \text{Rs. } 751$$

(72) Ans: b

(73) Ans: b

Explanation:

Condition for collinearity

$$x_1(y_2 - y_3) + x_2(y_3 - y_1) + x_3(y_1 - y_2) = 0$$

$$7(2 - 6) - 5(6 - a) + 3(a - 2) = 0$$

$$-28 - 30 + 5a + 3a - 6 = 0$$

$$8a = 64$$

$$a = 8$$

(74) Ans. c

Explanation:

$$x = 2^{\frac{1}{3}} - 2^{-\frac{1}{3}}$$

$$x^3 = 2 - \frac{1}{2} - 3x$$

$$x^3 + 3x = \frac{3}{2}$$

$$2x^3 + 6x = 3$$

(75) Ans: b

Explanation:

$$\lim_{x \rightarrow 1} \frac{x^2 - 1}{x^3 - 1}$$

Using D'L Hospital Rule

$$\lim_{x \rightarrow 1} \frac{2x}{3x^2} = \frac{2}{3}$$

(76) Ans. d

(77) Ans. d

Explanation:

$$P(B) = 2P(A) = x$$

$$P(B) = x$$

$$P(A) = \frac{x}{2}$$

$$x + \frac{x}{2} = 1$$

$$x = \frac{2}{3}$$

$$P(A) = \frac{1}{3}$$

(78) Ans. a

Explanation:

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$$0.6 = 0.5 + x - 0.5x$$

$$0.1 = 0.5x$$

$$x = 0.2$$

(79) Ans. a

Explanation:

$$\bar{x} = \frac{n_1 \bar{x}_1 + n_2 \bar{x}_2}{n_1 + n_2}$$

$$\bar{x}_2 = 616.67$$

(80) Ans. b

(81) Ans. d

(82) Ans. c

Explanation:

$$\frac{e^{-m} \cdot m^0}{0!} = \frac{1}{3}$$

$$e^{-m} = \frac{1}{3}$$

taking log on both sides

$$m \log e = \log 3$$

$$m = \log 3$$

(83) Ans. c

(84) Ans. d

(85) Ans. d

(86) Ans. d

(87) Ans. a

(88) Ans. d

Explanation:

Percentage of cases are they likely to contradict each other in the same fact

$$= 0.75 \times 0.20 + 0.80 \times 0.25$$

$$= 0.35 \times 100 = 35\%$$

(89) Ans. c

(90) Ans. c

(91) Ans. a

Explanation:

Extra Allowance

$$= 450 \times 6 - 2000 = \text{Rs.}700$$

(92) Ans. a

Explanation:

(93) Ans. a

Explanation:

$$\text{Largest angle} = \frac{32}{90} \times 360 = 128^\circ$$

$$\text{Smallest angle} = \frac{17}{90} \times 360 = 68^\circ$$

$$\text{Difference} = 60^\circ$$

(94) Ans. c

(95) Ans. c

Explanation:

$$3\bar{y} - 5\bar{x} + 180 = 0$$

$$3 \times 50 - 5\bar{x} + 180 = 0$$

$$\bar{x} = 66$$

(96) Ans. c

(97) Ans. b

Explanation:

Price(P)	800	825	850	875	900
Probability	0.15	0.25	0.30	0.20	0.10

$$E(X) = 800 \times 0.15 + 825 \times 0.25 + 850 \times 0.30 + 875 \times 0.20 + 900 \times 0.10$$

$$= 846.25$$

Expected Value of demand

$$= 6000 - 4 \times 846.25 = 2615$$

(98) Ans. d

Explanation:

$$\text{H.M.} = \frac{n}{1+3+5\dots 2n-1} = \frac{1}{n}$$

(99) Ans. b

Explanation:

$$m = \frac{Q_1 + Q_3}{2}$$

$$Q_1 = 2m - Q_3 = 47$$

$$\begin{aligned} \text{QD} &= \frac{Q_3 - Q_1}{Q_3 + Q_1} \times 100 \\ &= 23.58 \end{aligned}$$

(100) Ans. b

Explanation:

$$\text{S.E.}(\bar{x}) = \frac{\sigma}{\sqrt{n}} = \frac{18}{\sqrt{9}} = 6$$
