



Que. A]

Answers

$$(1) \frac{x^2}{2} + yx - \frac{y^2}{2} = c$$

$$(2) x^3 - xy = c$$

$$(3) \frac{x^3}{3} + yx + \frac{y^4}{4} = c$$

$$(4) \frac{3x^4}{4} - yx + \frac{y^2}{2} = c$$

$$(5) \frac{x^4}{4} + yx + \frac{y^3}{3} = c$$

$$(6) x^4 - xy + \frac{y^3}{3} = c$$

$$(7) \frac{5x^3}{3} + yx + \frac{y^4}{4} = c$$

$$(8) x^5 - yx = 0$$

$$(9) x^2y + y^3x + xy^3 = c$$

$$(10) \frac{x^2}{2} - 2yx + 5x - \frac{y^2}{2} + y = c$$

$$(11) \frac{x^2}{2} + yx - 2x - \frac{y^2}{2} + 4y = c$$

$$(12) xy^2 + y^3 = c$$

$$(13) x^2 - yx + \frac{y^2}{2} = c$$

Que B] Answers

$$(1) \frac{-x^3}{3y^3} + \log y = c$$

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

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

$$(4) \log x - \frac{x}{y} = c$$

$$(5) \frac{y}{x} + \log y = c$$

$$(6) \frac{x^4}{4} + \frac{x^2y^2}{2} + \frac{x^3}{3} = c$$

$$(7) \frac{x - y^2}{x} - \frac{1}{x} = c$$

$$(8) \frac{-x}{y} + 2y^2 = c$$

$$(9) \frac{xy}{y^2} + \frac{2x}{y^2} + y^2 = c$$

$$(10) \frac{1}{2} \log x - \frac{xy}{2} - \frac{1}{2} \log y = c$$

$$(11) \frac{3x^2y^2}{2} + \frac{4x^3}{3} = c$$

$$(12) \frac{x^3y}{2} - \frac{x^2y^2}{2} = c$$

$$(13) \frac{2}{3} \log x - \frac{1}{3} \log y - \frac{1}{xy} = c$$

$$(14) \log x - \frac{y^4}{x^4} = c$$

Que. C]

Answers

$$(1) y \cdot x = \frac{x^7}{7} + C$$

$$(2) y \cdot x = \frac{x^5}{5} + C$$

$$(3) \frac{y}{x} = \frac{x^4}{4} + C$$

$$(4) \frac{y}{x} = \frac{x^7}{7} + C$$

$$(5) y \cdot \sin x = x + C$$

$$(6) y \cdot \sec x = \sin x + C$$

$$(7) \frac{y}{x+1} = e^x + C$$

$$(8) y(1+x^2) = \sin x + C$$

$$(9) \frac{y}{x} = \frac{x^2}{2} + C$$

Que: (I)

$$(1) I = \frac{16\pi}{115}$$

$$(2) I = \frac{8\pi}{105}$$

$$(3) I = \frac{2\pi}{15}$$

$$(4) I = \frac{8\pi}{315}$$

$$(5) I = \frac{16\pi}{315}$$

$$(6) I = \frac{2\pi}{9009}$$

$$(7) I = \frac{128\pi}{3465}$$

Que. D] Answers

$$(1) \theta = 50^\circ C$$

$$(2) \theta = 40^\circ C$$

$$(3) \theta = 30^\circ C$$

Que. E] Answers

$$(1) x^2 + y^2 = C$$

$$(2) x^2 - y^2 = C$$

$$(3) 2x^2 + y^2 = C$$

$$(4) -\log x = \log y + C \text{ or } \log C$$

$$(5) \log x = \frac{1}{2} \log y + C \text{ or } \log C$$

$$(6) -\frac{x^2}{2} = y^2 + C$$

Que. F]

$$(1) i = 2(1 - e^{-\frac{25}{64}t})$$

$$(2) i = \frac{1}{2}(1 - e^{-10t})$$

$$(3) i = 2(1 - e^{-t/3})$$

Que. G]

$$(1) \text{ show that question.}$$

$$(2) q = 30(1 - e^{-t/15})$$

$$(3) q = 7(1 - e^{-t/12.5}) \text{ or } q = 7(1 - e^{-2t/5})$$

Que. H]

$$(1) T = 83.96^\circ C$$

$$(2) T = 89.46^\circ C$$

$$(3) T = 79.80^\circ C$$

Que. (J)



Que. (J)

①  $10!$    ②  $7!$    ③  $\frac{3}{4}\sqrt{\pi}$    ④  $\frac{15}{8}\sqrt{\pi}$    ⑤  $\frac{105}{16}\sqrt{\pi}$    ⑥  $4!$

⑦  $\frac{3}{2}\sqrt{\pi}$    ⑧  $4$    ⑨  $\frac{3}{16}\sqrt{\pi}$    ⑩  $4$    ⑪  $\frac{3}{16}\sqrt{\pi}$

⑫  $\frac{15}{4}\sqrt{\pi}$    ⑬  $\frac{315}{16}\sqrt{\pi}$    ⑭  $4$    ⑮  $\frac{315}{16}\sqrt{\pi}$    ⑯  $\frac{1}{4}\sqrt{\frac{1}{4}}$

Que. (K)

①  $\frac{1}{12}$    ②  $\frac{16}{315}$    ③  $\frac{\pi}{16}$    ④  $\frac{5}{128}\pi$    ⑤  $\frac{3}{256}\pi$

⑥  $\frac{1}{51848}$    ⑦  $\frac{1}{40040}$    ⑧  $\frac{1}{302328}$