

Ques 161 - 180	Ques 181 - 200
161. $(x+2)(x-2)(x-2)$ 162. $b^2 - 4ac = -24$ 163. $x = \frac{43}{15}$ 164. $x = \frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$ 165. <i>Proof.</i> 166. $\frac{dy}{dx} = -12\sin x \cos^3 x$ 167. <i>Max T.P</i> at $(-1, 17)$. <i>Min T.P</i> at $(3, -15)$. 168. $2x^2 + \frac{1}{x} + C$ 169. 0.363 radians 170. $25\sin(x - 1.287)$ (in radians) 171. $f(g(x)) = \frac{-x+2}{x+1}$ $g(f(x)) = \frac{1}{3x}$ 172. $y = -g(x)$ passes through $(a, -2), (0, -1), (b, -3)$ $y = 3 - g(x)$ passes through $(a, 5), (0, 2), (b, 0)$ 173. $f + g = \sqrt{66}$ 174. $\theta = 50.9$ 175. <i>Proof.</i> 176. $y = \sqrt{3}x + 2\sqrt{3}$ 177. $y = -3x + 9$ 178. Point of contact is $(1, 4)$ 179. $u_9 = 9$ $u_{10} = 6.8$ 180. Area = 36 square units	181. $3(3x+1)(x+2)(x-1)$ 182. $-1 < x < \frac{1}{3}$ 183. $x = 71$ 184. $x = 45^\circ, 105^\circ, 165^\circ, 225^\circ, 285^\circ, 345^\circ$ 185. $\sin 2a = \frac{15}{17}$ 186. $\frac{dy}{dx} = 2x \cos(x^2 - 3)$ 187. <i>Min T.P</i> at $(0, 0)$ <i>Max T.P</i> at $(2, 4)$ 188. $\frac{(2x+9)^6}{12} + C$ 189. $\frac{13}{3}$ 190. $2\sin(x + \frac{\pi}{3})$ 191. $x \neq -8$, $x \neq 2$ 192. $y = 2f(x) + 1$ passes through $(0, 1), (2, 7), (5, 1)$ 193. $\overrightarrow{PQ} = \begin{pmatrix} 8 \\ -4 \\ 1 \end{pmatrix}$ $\overrightarrow{PQ} = 9$ 194. $k = \frac{6}{7}$ 195. <i>Proof.</i> 196. $y = 3x + 7$ 197. $3y = 4x - 11$ 198. $P(1, -2)$ $Q(3, 4)$ 199. $u_1 = 16$ $u_2 = 20$ $u_3 = 21$ 200. Area = $\frac{9}{2}$ square units