

| Question | Answer | Marks | Guidance |
|----------|--|-----------|--|
| 7(a) | Differentiate to obtain form $k_1(2x+1)^{-\frac{4}{3}}$ | M1 | |
| | Obtain correct $-8(2x+1)^{-\frac{4}{3}}$ or unsimplified equivalent | A1 | |
| | Attempt equation of tangent at $\left(\frac{7}{2}, 6\right)$ with numerical gradient | M1 | Gradient must come from a differentiated expression. |
| | Obtain $y = -\frac{1}{2}x + \frac{31}{4}$ or equivalent of requested form | A1 | |
| | | 4 | |

| Question | Answer | Marks | Guidance |
|----------|---|-----------|--|
| 7(b) | Integrate to obtain form $k_2(2x+1)^{\frac{2}{3}}$ | M1 | |
| | Obtain correct $9(2x+1)^{\frac{2}{3}}$ or unsimplified equivalent | A1 | |
| | Use correct limits correctly to find area | M1 | Substitute correct limits into an integrated expression. 36 – 9 minimum working required. |
| | Obtain 27 | A1 | SC B1 if M1 A1 M0 scored. |
| | | 4 | |