

**Proof – A2 Further Mathematics P2**

## 1. June/2022/Paper\_7367/02/No.5

Prove by induction that, for all integers  $n \geq 1$ ,

$$\sum_{r=1}^n r^3 = \left\{ \frac{1}{2}n(n+1) \right\}^2$$

**[4 marks]**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---