

Name: **KEY**

Section 1.2a – Proficiency Check

Use a Factor Tree or another logical method to demonstrate the square or cube root of the following

Emerging	Proficient	Extending
$\sqrt{676}$ $\begin{array}{c} \wedge \\ 2 \quad 338 \\ \wedge \\ 2 \quad 169 \\ \wedge \\ 13 \quad 13 \end{array}$ $\underbrace{2 \cdot 13} \cdot \underbrace{2 \cdot 13}$ $\underbrace{26}_{26}$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">26</div>	$\sqrt{961}$ $30^2 \quad 40^2$ <p>Either</p> $\begin{array}{c} 31 \quad 39 \\ 31 \quad 39 \\ \hline 31 \\ 930 \\ \hline 961 \end{array}$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">31</div>	$\sqrt{3249}$ $50^2 \quad 60^2$ <p>Either</p> $\begin{array}{c} 53 \quad 57 \\ 53 \quad 57 \\ \hline 1399 \\ 12850 \\ \hline 3249 \end{array}$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">57</div>
$\sqrt[3]{64}$ $\begin{array}{c} \wedge \\ (4) \quad 16 \\ \wedge \\ (4) \quad (4) \end{array}$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">4</div>	$\sqrt[3]{3375}$ $\begin{array}{c} \wedge \\ 5 \quad 675 \\ \wedge \\ 5 \quad 135 \\ \wedge \\ 5 \quad 27 \\ \wedge \\ 3 \quad 9 \\ \wedge \\ 3 \quad 3 \end{array}$ $\underbrace{3 \cdot 5} \cdot \underbrace{3 \cdot 5} \cdot \underbrace{3 \cdot 5}$ $\underbrace{15}_{15} \cdot \underbrace{15}_{15} \cdot \underbrace{15}_{15}$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">15</div>	$\sqrt[3]{13824}$ $\begin{array}{c} \wedge \\ (2) \quad 6912 \\ \wedge \\ (2) \quad 3456 \\ \wedge \\ (2) \quad 1728 \\ \wedge \\ (2) \quad 864 \\ \wedge \\ (2) \quad 432 \\ \wedge \\ (2) \quad 216 \\ \wedge \\ (2) \quad 108 \\ \wedge \\ (2) \quad 54 \\ \wedge \\ 6 \quad 9 \\ \wedge \\ (2) \quad 3 \quad 3 \end{array}$ $2 \cdot 2 \cdot 2 \cdot 3$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">24</div>