**1A Laws of Indices**

1. Simplify
2. $x^{2}×x^{5}$
3. $2r^{2}×3r^{3}$
4. $\frac{b^{7}}{b^{4}}$
5. $6x^{5}÷3x^{3}$
6. $\left(a^{3}\right)^{2}×2a^{2}$
7. $\left(3x^{2}\right)^{3}÷x^{4}$
8. Expand and simplify if possible
9. $-3x(7x-4)$
10. $y^{2}(3-2y^{3})$
11. $4x(3x-2x^{2}+5x^{3})$
12. $2x\left(5x+3\right)-5(2x+3)$
13. Simplify
14. $\frac{x^{7}+x^{4}}{x^{3}}$
15. $\frac{3x^{2}-6x^{5}}{2x}$
16. $\frac{20x^{7}+15x^{3}}{5x^{2}}$

**1D Negative & Fractional Indices**

1. Simplify
2. $\frac{x^{3}}{x^{-3}}$
3. $x^{\frac{1}{2}}×x^{\frac{3}{2}}$
4. $\left(x^{3}\right)^{\frac{2}{3}}$
5. $\sqrt[3]{125x^{6}}$
6. $\frac{2x^{2}-x}{x^{5}}$
7. Evaluate (work out the value of)
8. $9^{\frac{1}{2}}$
9. $64^{\frac{1}{3}}$
10. $49^{\frac{3}{2}}$
11. $25^{-\frac{3}{2}}$
12. Given that $y=\frac{1}{16}x^{2}$, express $y^{\frac{1}{2}}$ in the form $kx^{n}$ where $k$ and $n$ are constants
13. Given that $y=\frac{1}{16}x^{2}$, express $4y^{-1}$ in the form $kx^{n}$ where $k$ and $n$ are constants