National 5 Final Exam Practice	
Numerical Skills	Using Indices
Average Score	2 / 3 Marks

1. Simplify $\frac{3a^3 \times 4a^{-4}}{6a^5}$
2. Expand and simplify $2p^3(4p^2 - 3p^{-3})$
3. Evaluate $32^{3/5}$
4. If a = 4 and b = 9, evaluate $a^{-1/2} + b^{1/2}$
5. Simplify $3p^3 \times (p^4)^{-2}$, expressing your answer with a positive index.
6. Expand and simplify $2a^2(3a^{-3} + 4a^{-2})$, leaving your answer with a positive index.
7. Evaluate $(16^3)^{-1/4}$.
8. Simplify $\frac{4p^{-3} \times p^{-2}}{12p}$
9. Evaluate $2(a^{-1/2})^{-3}$ where a = 4
10. Simplify $(p^4q^{-3})^{1/2}$, expressing your answer with positive indices.
11. Evaluate $(32)^{-1/5} + (9)^{3/2}$.
12. Expand and simplify $5a^3(2a^2 - 3a^{-3})$.
13. Simplify $8^{-4/3} + 4(2)^{-3}$.
14. Evaluate $(a^2b^3)^{1/2}$ when a = 4 and b = 9.
15. Simplify $\frac{3p^{-2} \times 8 p^4}{4p^{-3}}$