Number Revision			5
(a)	**(b)**	**(c)**	**(d)**
Evaluate: (a) $36^{3/2}$ 216 (b) $64^{-2/3}$ $\frac{1}{16}$ (c) $32^{4/5}$ 16	$A = 2^3 \times 5^4 \times 7^2 \times 13$ $B = 2^5 \times 5 \times 7^5 \times 11$ (a) Find the highest common factor (HCF) of A and B $2^3 \times 5 \times 7^2$ (b) Find the lowest common factor of $2A$ and $5B$ $2^5 \times 5^4 \times 7^5 \times 11 \times 13$	Calculate $\frac{(5.2 \times 10^{61}) \times (8.7 \times 10^{75})}{2.6 \times 10^5}$ giving your answer in standard form 1.74×10^{132}	Use an algebraic method to show that $0.6\dot{2}\dot{1} = \frac{41}{66}$ $x = 0.6\dot{2}\dot{1}$ $10x = 6.\dot{2}\dot{1}$ $1000x = 621.\dot{2}\dot{1}$ $990x = 615$ $x = \frac{615}{990} = \frac{41}{66}$
(e)	**(f)**	**(g)**	**(h)**
Rationalise the denominator of $\frac{5+\sqrt{12}}{2-\sqrt{3}}$ giving your answer in the form $a + b\sqrt{3}$ $16 + 9\sqrt{3}$	$a = 5$ correct to the nearest integer, $b = 20$ correct to 1 significant figure and $c = 7.5$ correct to 1 decimal place. Find the upper and lower bounds of $\frac{b-c}{a}$ $UB = 3.9$ $LB = 1.3\dot{5}\dot{4}$	Write $\frac{8^3 \times \sqrt{4^{10}}}{16^{3/2}}$ as a single power of 2 $\frac{2^9 \times 2^{10}}{2^6}$ $= 2^{13}$	Una invested $\$4000$ at a compound interest rate of $x\%$. After 7 years, her investment is worth $\$4787.31$. Find the value of x. $x = 2.6$