a)
A is proportional to the square of B.
B is increased by 20%.
Work out the percentage increase in A.

What equation can be formed for A in terms of B?	$A \propto B^2$ $A = kB^2$
What multiplier increases B by 20%?	20% increase = 120% 120% as a decimal = 1.2
What does the equation look like after applying this increase?	$A = k(1.2B)^2$
Can this be simplified?	$A = k \times 1.2B \times 1.2B$ $A = k \times 1.2 \times 1.2 \times B \times B$ $A = 1.44kB^2$
What does this multiplier represent?	$1.44 = 144\%$ 144% = 44% increase

b)
A is proportional to the square of B.
B is increased by 50%.
Work out the percentage increase in A.

What equation can be formed for A in terms of B?	$A \propto B^2$ $A = kB^2$
What multiplier increases B by 50%?	50% increase = 150% 150% as a decimal = 1.5
What does the equation look like after applying this increase?	$A = k(1.5B)^2$
Can this be simplified?	
What does this multiplier represent?	

c)
A is proportional to the cube of B.
B is increased by 10%.
Work out the percentage increase in A.

What equation can be formed for A in terms of B?	$A \propto B^3$ $A = kB^3$
What multiplier increases B by 10%?	
What does the equation look like after applying this increase?	
Can this be simplified?	
What does this multiplier represent?	

d)
A is proportional to the cube of B.
B is decreased by 20%.
Work out the percentage decrease in A.