**Direct Proportion Homework**

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| **Literacy**  p is **proportional** to q**.**  This means that as p increases,  q will also increase by a **multiplied constant**, k.  (Like scale factors in shape!) | **Research**  **∝**  Find (or create) a name for the proportionality symbol that’s better than ‘fishy alpha’. | **Memory**  **Remember if…**  TIP - Write down the formula at the start of every question so you can substitute in your values easily!  **then…** |
| **Skills**  **1)**  **3)**  **f ∝ g When f=3, g=9 a) find the formula linking f and g. b) find f when g=96**  **n ∝ a When a=5, n=10 a) find the formula linking a and n b) find a when n=14**  **4)**  **h is directly proportional to t. When h=6, t=10 a) express h in terms of t b) find h when t=6**  **y ∝ x2 When x=5, y=10 a) find the formula linking y and x b) find y when x=9**  **2)** | | **Stretch**  **6)**  **The weight of a metal sphere varies directly as the cube of its radius. The weight of a metal sphere of radius 3 cm is 1.02 kg. Calculate the weight of a metal sphere of radius 5 cm.**  **5)**  **p ∝ q When p=15, q=25 a) find the formula linking p and q b) find q when p=18** |