**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!$$y∝x$$**then…**$y=kx$  |
| **Skills****1)****3)****f ∝ gWhen f=3, g=9a) find the formula linking f and g.b) find f when g=96****n ∝ aWhen a=5, n=10a) find the formula linking a and nb) find a when n=14****4)****h is directly proportional to t. When h=6, t=10a) express h in terms of tb) find h when t=6****y ∝ x2When x=5, y=10a) find the formula linking y and xb) 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 ∝** $√$**qWhen p=15, q=25a) find the formula linking p and qb) find q when p=18** |