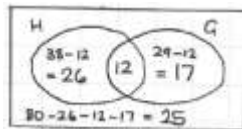


A little bit of maths each day – February 2018 Calendar – Higher Tier – Answers

- 1st $x = 4, y = -3$
 2nd $y \propto x^3 \quad y = 4x^3$
 3rd/4th



(b) $5/16$

- 5th 8748cm^3
 6th $n^2 + 3n - 1$
 7th 58cm
 8th $\pounds 665.86$
 9th 700

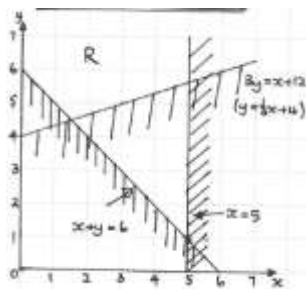
10th/11th $2\overrightarrow{BM} = 3\overrightarrow{BP}$

12th (a) 74.1° (b) $\frac{x\sqrt{53}}{2}$

13th 1.79 or -1.12

14th $y = \frac{27}{5}x + \frac{53}{9}$

15th



- 16th 123676632
 17th/18th Cheaper from China but postage costs may make UK cheaper
 19th 5
 20th (a) 523010 (b) 4.01×10^{-4} (c) 5.20×10^2
 21st 62.5% reduction
 22nd 0.88%
 23rd (a) $-3 < x \leq 4$ (b) $-2/9$ (c) $0, 1, 2, 3, 4$
 24th/25th $p = 7, q = 3, m = 189$
 26th (a) $1, 3, 7, 15$ (b) NO 1026 not a power of 2
 27th $35 : 20 : 12$
 28th Rotation, 90° anticlockwise (or 270° clockwise) about $(1, -2)$