

| Question | Answer | Marks | Guidance |
|----------|--|-----------|--|
| 10(a) | State or imply that first 3 terms of GP are $5 + d$, $5 + 4d$, $5 + 10d$ | B1 | |
| | Form equation $(5 + 4d)^2 = (5 + d)(5 + 10d)$ or equivalent | M1 | |
| | Obtain $d = 2.5$ | A1 | Ignore 0 as a solution. SC B1 Obtain $d = 2.5$ and 7.5, 15, 30 by trial and improvement www. |
| | Alternative Method for Question 10(a): | | |
| | State or imply that first 3 terms of GP are $5 + d$, $5 + 4d$, $5 + 10d$ | B1 | |
| | $(5 + d)R = 5 + 4d \rightarrow d = \frac{5 - 5R}{R - 4}$, $(5 + d)R^2 = 5 + 10d \rightarrow R^2 - 3R + 2 [= 0]$ | M1 | OE Eliminates d . |
| | Obtain $d = 2.5$ | A1 | |
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|----------|---|-----------|----------|
| 10(b) | Use correct formula for sum of AP with their value of d | M1 | |
| | Obtain or imply 7700 | A1 | |
| | State or imply GP is 7.5, 15, 30, ... | B1 | |
| | Use correct formula for sum of GP with their common ratio | M1 | |
| | Obtain $S_{77} - G_{10} = 27.5$ | A1 | |
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