the formula for u_n, the nth term of an arithmetic series, is

ar^{n-1}

the formula for S_n, the sum of the first n terms of a geometric series, is

$\frac{a(1-r^n)}{1-r}$

the formula for S_n, the sum of the first n terms of an arithmetic series series, is

$\frac{n}{2}[2a+(n-1)d]$

For a geometric series to possess a sum to infinity, then

$-1<r<1$

Find the sum of the first 8 multiples of 3.

Find the 15th term of the series $3+5+7+...$

$a+(n-1)d$

a geometric series

is an example of ...

$3+9+27+81+...$

$4+10+16+22+...$ is an example of...

The first three terms of an arithmetic series are $(k+2)$, $(2k+3)$ and $(4k-2)$ respectively. Find the value of the constant k.

6

The first term of a geometric series is 16 and the common ratio is 1.5. Find the least value of n for which the sum of the first n terms is greater than 30 000.

The sum of the first 8 terms of an arithmetic series is 24 and the sum of the first 16 terms is 40. Find the first term and the common difference.

108

$a=43, d=-3$

Find the sum to infinity of the series $500-300+180-...$

312.5

Find the sum to infinity of the series $270+90+30+...$

18

The common ratio of a geometric series is 0.55 and the sum to infinity of the series is 40. Find the first term of the series.

31

49152

Find the 15th term of the series $3+6+12+...$

Write an equation for "the 15th term of an AP is 25"

an arithmetic series

The nineteenth and twentieth terms of a geometric series are 5000 and 2500 respectively. Find the common ratio.

$\frac{1}{2}$

2

The first and fourth terms of a geometric series are 24 and 8 respectively. Find the first term and the common ratio.

17

$a=216, r=\frac{1}{3}$

The second and fifth terms of a geometric series are 0.5 and 32 respectively. Find the first term and the common ratio.

$a=0.125, r=4$

24

$a=15, d=2$

Find the sum to infinity of the series $12+6+3+1.5+...$

405

0.0064

A geometric series has first term 80 and common ratio 0.2. Find the difference between the sum to infinity of the series and the sum of the first 8 terms.

$ar^{14}=25$

$\frac{a(1-r^{14})}{1-r}=25$

Write an equation for "the 15th term of a GP is 25"

$a+14d=25$

The first and fourth terms of a geometric series are 5 and 40 respectively. Find the common ratio.

$a=86, d=-7$

The third and eighth terms of an arithmetic series are 72 and 37 respectively. Find the first term and the common difference.

$a=2, d=11$

The fifth term of an arithmetic series is 23 and the sum of the first 10 terms of the series is 240. Find the first term and the common difference of the series.

3

The first and third terms of an arithmetic series are 21 and 27 respectively. Find the common difference.

$\frac{15}{2}[2a+14d]=25$

Write an equation for "the sum of the first 15 terms of an AP is 25"

Write an equation for "the sum of the first 15 terms of a GP is 25"