

Name : \_\_\_\_\_

## Infinite Geometric Series

Sheet 1

- 1) The sum of an infinite geometric series is  $\frac{125 + 25\sqrt{6}}{19}$  and the first term is 5. Find the common ratio.
- 2) What is the first term of an infinite geometric series, if the sum of the series and the common ratio are 35 and 0.6 respectively?
- 3) The first term of an infinite geometric series is  $-23$  and the sum is  $-92$ . Determine the common ratio.
- 4) Determine the first term of an infinite geometric series, if the sum of the series and the common ratio are 8.5 and 0.8 respectively.
- 5) Find the common ratio of an infinite geometric series, if the sum and first term of the series are  $\frac{133}{2}$  and 19 respectively.

**Infinite Geometric Series**

- 1) The sum of an infinite geometric series is  $\frac{125 + 25\sqrt{6}}{19}$  and the first term is 5. Find the common ratio.

$$\text{common ratio} = \frac{\sqrt{6}}{5}$$

- 2) What is the first term of an infinite geometric series, if the sum of the series and the common ratio are 35 and 0.6 respectively?

$$\text{first term} = 14$$

- 3) The first term of an infinite geometric series is  $-23$  and the sum is  $-92$ . Determine the common ratio.

$$\text{common ratio} = 0.75$$

- 4) Determine the first term of an infinite geometric series, if the sum of the series and the common ratio are 8.5 and 0.8 respectively.

$$\text{first term} = 1.7$$

- 5) Find the common ratio of an infinite geometric series, if the sum and first term of the series are  $\frac{133}{2}$  and 19 respectively.

$$\text{common ratio} = \frac{5}{7}$$

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## Infinite Geometric Series

Sheet 2

- 1) The common ratio of an infinite geometric series is  $\frac{2}{5}$  and the sum is  $\frac{140}{3}$ . Determine the first term.
- 2) Determine the common ratio of an infinite geometric series, if the sum of the series and the first term are 53.75 and 43 respectively.

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- 3) Find the first term and common ratio of the series are  $\frac{16}{3}$  and  $\frac{1}{2}$  respectively.
- 4) What is the common ratio and the first term if the sum of the series is 10 and the first term is 2.
- 5) The sum of an infinite geometric series is  $8 + 4\sqrt{3}$  and the common ratio is  $\sqrt{3} - 1$ . Find the first term.

**Infinite Geometric Series**

- 1) The common ratio of an infinite geometric series is  $\frac{2}{5}$  and the sum is  $\frac{140}{3}$ . Determine the first term.

**first term = 28**

- 2) Determine the common ratio of an infinite geometric series, if the sum of the series and the first term are 53.75 and 43 respectively.

- 3) Find the first term and common ratio of the series are  $\frac{16}{3}$  and  $\frac{1}{2}$  respectively.

- 4) What is the common ratio and the first term if the sum of the series is  $\frac{16}{3}$  and the first term is  $\frac{16}{3}$ .

- 5) The sum of an infinite geometric series is  $8 + 4\sqrt{3}$  and the common ratio is  $\sqrt{3} - 1$ . Find the first term.

**first term = 4**

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## Infinite Geometric Series

Sheet 3

- 1) Find the common ratio of an infinite geometric series, if the sum and first term of the series are 29 and 14.5 respectively.
- 2) The first term of an infinite geometric series is 3 and the sum is  $\frac{27}{7}$ . Determine the common ratio.

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- 3) Determine the first term and the common ratio of the series and the sum of the series and
- 4) What is the first term and the common ratio of the series and the
- 5) The sum of an infinite geometric series is 116 and the first term is 5.8. Find the common ratio.

**Infinite Geometric Series**

- 1) Find the common ratio of an infinite geometric series, if the sum and first term of the series are 29 and 14.5 respectively.

**common ratio = 0.5**

- 2) The first term of an infinite geometric series is 3 and the sum is  $\frac{27}{7}$ . Determine the common ratio.

- 3) Determine the first term and the common ratio of an infinite geometric series if the sum of the series and

- 4) What is the first term and the common ratio of an infinite geometric series if the sum of the series and the

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**5**

- 5) The sum of an infinite geometric series is 116 and the first term is 5.8. Find the common ratio.

**common ratio = 0.95**

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## Infinite Geometric Series

Sheet 4

- 1) The sum of an infinite geometric series is  $\frac{45}{8}$  and the common ratio is  $\frac{1}{5}$ . Find the first term.
- 2) Find the first term of an infinite geometric series, if the sum and common ratio of the series are 14 and 0.4 respectively.

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- 3) What is the common ratio and the first term if the sum of the series is 14 and the common ratio is 0.4?
- 4) Determine the common ratio and the first term if the sum of the series is 14 and the common ratio is 0.4.
- 5) The common ratio of an infinite geometric series is 0.9 and the sum is 65. Determine the first term.

**Infinite Geometric Series**

- 1) The sum of an infinite geometric series is  $\frac{45}{8}$  and the common ratio is  $\frac{1}{5}$ . Find the first term.

$$\text{first term} = \frac{9}{2}$$

- 2) Find the first term of an infinite geometric series, if the sum and common ratio of the series are 14 and 0.4 respectively.

- 3) What is the common ratio and the first term if the sum of the series is 14 and the first term is 2.

- 4) Determine the common ratio and the first term if the sum of the series is 14 and the first term is 2.

- 5) The common ratio of an infinite geometric series is 0.9 and the sum is 65. Determine the first term.

$$\text{first term} = 6.5$$

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## Infinite Geometric Series

1) What is the first term of an infinite geometric series, if the sum of the series and the common ratio are 322 and  $\frac{6}{7}$  respectively?

2) The sum of an infinite geometric series is  $\frac{3\sqrt{5}}{10}$  and the first term is  $\frac{\sqrt{5}}{4}$ . Find the common ratio.

3) Find the common ratio and first term of the series are 15 and 10 respectively.

4) The common ratio and first term of the series are 2 and 1 respectively. Determine the sum is 43. Determine the sum of the series.

5) Determine the common ratio of an infinite geometric series, if the sum of the series and the first term are 90 and 54 respectively.

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**Infinite Geometric Series**

- 1) What is the first term of an infinite geometric series, if the sum of the series and the common ratio are 322 and  $\frac{6}{7}$  respectively?

**first term = 46**

- 2) The sum of an infinite geometric series is  $\frac{3\sqrt{5}}{10}$  and the first term is  $\frac{\sqrt{5}}{4}$ . Find the common ratio.

- 3) Find the common ratio and first term of the series are 15 and 10 respectively.

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- 4) The common ratio and first term of the series are 0.4 and 10 respectively. Determine the sum of the series.

- 5) Determine the common ratio of an infinite geometric series, if the sum of the series and the first term are 90 and 54 respectively.

**common ratio = 0.4**