

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

## Evaluate: Infinite Geometric Series

Mixed: S1

Evaluate each infinite geometric series.

1)  $a = 5.5 ; r = 0.6$

2)  $3 + 9 + 27 + 81 + \dots$

3)  $\sum_{k=1}^{\infty} (4 \cdot 0.75^k)$

$25 + 12.5 + \dots$

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5)  $a = 12 ; r = 8$

$\frac{64}{625} + \frac{128}{3125} + \dots$

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7)  $\sqrt{6} + 0.2\sqrt{6} + 0.04\sqrt{6} + 0.008\sqrt{6} + \dots$

8)  $\sum_{c=1}^{\infty} \left( \frac{6}{5} \cdot 0.9^{c+1} \right)$

**Evaluate: Infinite Geometric Series**

Evaluate each infinite geometric series.

1)  $a = 5.5 ; r = 0.6$

**13.75**

2)  $3 + 9 + 27 + 81 + \dots$

**No sum**

3)  $\sum_{k=1}^{\infty} (4 \cdot 0.75^k)$

**16**

$25 + 12.5 + \dots$

**No sum**

5)  $a = 12 ; r = 8$

**No sum**

$\frac{64}{625} + \frac{128}{3125} + \dots$

 **$r = 1\frac{1}{15}$** 

7)  $\sqrt{6} + 0.2\sqrt{6} + 0.04\sqrt{6} + 0.008\sqrt{6} + \dots$

 **$\frac{\sqrt{6}}{0.8}$** 

8)  $\sum_{c=1}^{\infty} \left(\frac{6}{5} \cdot 0.9^{c+1}\right)$

**9.72**

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