

Math Sheet

Name _____ Score _____ Teacher _____ Date _____

General Series

Expand, evaluate, or rewrite each finite series using sigma notation.

1. Expand the series

$$\sum_{n=0}^6 (95 - 3n)$$

Answer: _____

2. Expand the series

$$\sum_{n=0}^6 (4n^2 - 5n)$$

Answer: _____

3. Expand the series

$$\sum_{n=1}^5 (3n^2 + 6)$$

Answer: _____

4. Expand the series

$$\sum_{n=1}^5 (3 \cdot 3^n)$$

Answer: _____

5. Evaluate the series

$$\sum_{n=0}^4 (3n - 4)$$

Answer: _____

6. Evaluate the series

$$\sum_{n=0}^5 (64 - n^2)$$

Answer: _____

7. Evaluate the series

$$\sum_{n=1}^6 (2^n)$$

Answer: _____

8. Evaluate the series

$$\sum_{n=1}^5 (23 - n)$$

Answer: _____

9. Write using sigma notation

$$21 + 9 - 11 - 39 - 75$$

Sigma notation: _____

10. Write using sigma notation

$$4 + 8 + 12 + 16$$

Sigma notation: _____

11. Write using sigma notation

$$1 + 4 + 9 + 16 + 25 + 36$$

Sigma notation: _____

12. Write using sigma notation

$$1 + 2 + 3 + 4 + 5 + 6$$

Sigma notation: _____

General Series

Answer Key

Expand, evaluate, or rewrite each finite series using sigma notation.

1. Expand the series

$$\sum_{n=0}^6 (95 - 3n)$$

$$95 + 92 + 89 + 86 + 83 + 80 + 77$$

2. Expand the series

$$\sum_{n=0}^6 (4n^2 - 5n)$$

$$0 - 1 + 6 + 21 + 44 + 75 + 114$$

3. Expand the series

$$\sum_{n=1}^5 (3n^2 + 6)$$

$$9 + 18 + 33 + 54 + 81$$

4. Expand the series

$$\sum_{n=1}^5 (3 \cdot 3^n)$$

$$9 + 27 + 81 + 243 + 729$$

5. Evaluate the series

$$\sum_{n=0}^4 (3n - 4)$$

$$\text{Sum} = 10$$

6. Evaluate the series

$$\sum_{n=0}^5 (64 - n^2)$$

$$\text{Sum} = 329$$

7. Evaluate the series

$$\sum_{n=1}^6 (2^n)$$

$$\text{Sum} = 126$$

8. Evaluate the series

$$\sum_{n=1}^5 (23 - n)$$

$$\text{Sum} = 100$$

9. Write using sigma notation

$$21 + 9 - 11 - 39 - 75$$

One possible answer:

$$\sum_{n=1}^5 (25 - 4n^2)$$

10. Write using sigma notation

$$4 + 8 + 12 + 16$$

One possible answer:

$$\sum_{n=1}^4 (4n)$$

11. Write using sigma notation

$$1 + 4 + 9 + 16 + 25 + 36$$

One possible answer:

$$\sum_{n=1}^6 (n^2)$$

12. Write using sigma notation

$$1 + 2 + 3 + 4 + 5 + 6$$

One possible answer:

$$\sum_{n=1}^6 (n)$$