



Math worksheet on 'Number Sequences - Polynomial, First Terms (Level 2)'. Part of a broader unit on 'Patterns and Sums - Intro'

Learn online: app.mobius.academy/math/units/patterns_and_sums_intro/

1 What are the first 3 terms, starting with $z = 1$ in this number sequence

$$2 - 5z^2$$

- | | |
|----------|---------------|
| a | -3, -38, -133 |
| b | -3, -18, -43 |
| c | -10, -25, -50 |
| d | -7, -22, -47 |
| e | -5, 10, 35 |
| f | -7, -13, -23 |

2 What are the first 3 terms, starting with $x = 1$ in this number sequence

$$5x^2 + 2x - 3$$

- | | | | |
|----------|------------|----------|-----------|
| a | 6, 19, 42 | b | 0, 13, 36 |
| c | 10, 27, 54 | d | 4, 25, 60 |
| e | 4, 21, 48 | f | 5, 11, 21 |

3 What are the first 3 terms, starting with $m = 1$ in this number sequence

$$3 - 3m^2$$

- | | |
|----------|--------------|
| a | -6, -9, -12 |
| b | -3, 6, 21 |
| c | 0, -9, -24 |
| d | 0, -21, -78 |
| e | -3, -9, -15 |
| f | -6, -15, -30 |

4 What are the first 3 terms, starting with $b = 1$ in this number sequence

$$7b^2 - 2b + 8$$

- | | | | |
|----------|------------|----------|------------|
| a | -2, 20, 58 | b | 17, 40, 77 |
| c | 13, 32, 65 | d | -8, -4, 4 |
| e | -4, 4, 16 | f | 13, 28, 53 |

5 What are the first 3 terms, starting with $m = 1$ in this number sequence

$$8 - 4m^2$$

- | | |
|----------|---------------|
| a | 4, -24, -100 |
| b | 4, -8, -28 |
| c | -8, -20, -40 |
| d | -12, -24, -44 |
| e | -12, -36, -76 |
| f | -4, 8, 28 |

6 What are the first 3 terms, starting with $r = 1$ in this number sequence

$$3r^2 - 6r + 5$$

- | | | | |
|----------|------------|----------|------------|
| a | 2, -7, -22 | b | 14, 29, 50 |
| c | 2, 5, 14 | d | 7, 31, 67 |
| e | -6, 3, 22 | f | -5, 7, 31 |

7 What are the first 3 terms, starting with $p = 1$ in this number sequence

$$2p^2 - 7p + 9$$

- | | | | |
|----------|-------------|----------|------------|
| a | 4, -11, -36 | b | 4, 3, 6 |
| c | 5, 33, 75 | d | -9, 5, 33 |
| e | -7, 13, 51 | f | 18, 31, 48 |