

Name:

Class/Set:

# Starter 16/11

Malvern College

1: Give the next three numbers in the sequence:

a) 1.4, 1.3, 1.2, 1.1, ..., ..., ...

b)  $-1.5, -0.9, -0.3, 0.3, \dots, \dots, \dots$

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c)  $-0.7, -1.2, -1.7, -2.2, \dots, \dots, \dots$

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2: Give the next three numbers in the sequence:

a) 14, 28, 46, 68, ..., ..., ...

b) 233, 218, 197, 170, ..., ..., ...

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c) 85, 80, 73, 64, ..., ..., ...

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3: Find a formula for the  $n$ th term:

a) 8, 9, 10, 11, 12, ...

b) 3, 6, 9, 12, 15, ...

c) 15, 25, 35, 45, 55, ...

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4: Find a formula for the  $n$ th term:

a) 16, 24, 34, 46, 60, ...

b) 21, 39, 63, 93, 129, ...

c) 12, 22, 36, 54, 76, ...

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5: Solve the following:

a)  $8x + 2 \leq 42$

b)  $6x - 7 > -43$

c)  $7x + 7 < -14$

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6: Solve the following:

a)  $f + 77 = 9f + 5$

b)  $2g + 56 = 10g + 8$

c)  $8e + 9 = 2e + 51$

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# Answers: Starter 16/11

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1: a) 1, 0.9, 0.8

b) 0.9, 1.5, 2.1

c)  $-2.7, -3.2, -3.7$

2: a) 94, 124, 158

b) 137, 98, 53

c) 53, 40, 25

3: a)  $t_n = n + 7$

b)  $t_n = 3n$

c)  $t_n = 10n + 5$

4: a)  $t_n = n^2 + 5n + 10$

b)  $t_n = 3n^2 + 9n + 9$

c)  $t_n = 2n^2 + 4n + 6$

5: a)  $x \leq 5$

b)  $x > -6$

c)  $x < -3$

6: a)  $9f + 5 = f + 77$  [  $-f$  ]

$8f + 5 = 77$  [  $-5$  ]

$8f = 72$  [  $\div 8$  ]

$f = 9$

b)  $10g + 8 = 2g + 56$  [  $-2g$  ]

$8g + 8 = 56$  [  $-8$  ]

$8g = 48$  [  $\div 8$  ]

$g = 6$

c)  $8e + 9 = 2e + 51$  [  $-2e$  ]

$6e + 9 = 51$  [  $-9$  ]

$6e = 42$  [  $\div 6$  ]

$e = 7$