

姓名 Name : \_\_\_\_\_ 學號 Student ID # : \_\_\_\_\_  
Quiz 3 MATH 203: Discrete Mathematics I

Solve the recurrence relation

$$a_n = (-5)a_{n-1} + (-4)a_{n-2} \text{ for } n \geq 2,$$

$$a_0 = 3, a_1 = 15.$$

Write your solution in the form of

$$a_n = c_1 \cdot r_1^n + c_2 \cdot r_2^n.$$

$$\text{Check code} = (c_1 + c_2 + r_1 + r_2) \bmod 10$$

**Solution.**



Indicating your answer by **underlining it** or **circling it**.  
Compute the **check code** and fill it into the **box on the right**.

check code

姓名 Name : \_\_\_\_\_ 學號 Student ID # : \_\_\_\_\_  
Quiz 3 MATH 203: Discrete Mathematics I

Solve the recurrence relation

$$a_n = (-2)a_{n-1} + (8)a_{n-2} \text{ for } n \geq 2,$$

$$a_0 = -17, a_1 = 20.$$

Write your solution in the form of

$$a_n = c_1 \cdot r_1^n + c_2 \cdot r_2^n.$$

$$\text{Check code} = (c_1 + c_2 + r_1 + r_2) \bmod 10$$

**Solution.**



Indicating your answer by **underlining it** or **circling it**.  
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Quiz 3 MATH 203: Discrete Mathematics I

Solve the recurrence relation

$$a_n = (2)a_{n-1} + (15)a_{n-2} \text{ for } n \geq 2,$$

$$a_0 = 6, a_1 = -42.$$

Write your solution in the form of

$$a_n = c_1 \cdot r_1^n + c_2 \cdot r_2^n.$$

$$\text{Check code} = (c_1 + c_2 + r_1 + r_2) \bmod 10$$

**Solution.**



Indicating your answer by **underlining it** or **circling it**.  
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Quiz 3 MATH 203: Discrete Mathematics I

Solve the recurrence relation

$$a_n = (-1)a_{n-1} + (12)a_{n-2} \text{ for } n \geq 2,$$

$$a_0 = -4, a_1 = 9.$$

Write your solution in the form of

$$a_n = c_1 \cdot r_1^n + c_2 \cdot r_2^n.$$

Check code =  $(c_1 + c_2 + r_1 + r_2) \bmod 10$

**Solution.**



Indicating your answer by **underlining it** or **circling it**.  
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Quiz 3 MATH 203: Discrete Mathematics I

Solve the recurrence relation

$$a_n = (7)a_{n-1} + (-10)a_{n-2} \text{ for } n \geq 2,$$

$$a_0 = 8, a_1 = 10.$$

Write your solution in the form of

$$a_n = c_1 \cdot r_1^n + c_2 \cdot r_2^n.$$

$$\text{Check code} = (c_1 + c_2 + r_1 + r_2) \bmod 10$$

**Solution.**



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Quiz 3

MATH 203: Discrete Mathematics I

Solve the recurrence relation

$$a_n = (3)a_{n-1} + (4)a_{n-2} \text{ for } n \geq 2,$$

$$a_0 = 1, a_1 = 44.$$

Write your solution in the form of

$$a_n = c_1 \cdot r_1^n + c_2 \cdot r_2^n.$$

Check code =  $(c_1 + c_2 + r_1 + r_2) \bmod 10$

**Solution.**



Indicating your answer by **underlining it** or **circling it**.  
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姓名 Name : \_\_\_\_\_ 學號 Student ID # : \_\_\_\_\_  
Quiz 3 MATH 203: Discrete Mathematics I

Solve the recurrence relation

$$a_n = (-2)a_{n-1} + (15)a_{n-2} \text{ for } n \geq 2,$$

$$a_0 = -5, a_1 = 33.$$

Write your solution in the form of

$$a_n = c_1 \cdot r_1^n + c_2 \cdot r_2^n.$$

$$\text{Check code} = (c_1 + c_2 + r_1 + r_2) \bmod 10$$

**Solution.**



Indicating your answer by **underlining it** or **circling it**.  
Compute the **check code** and fill it into the **box on the right**.

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姓名 Name : \_\_\_\_\_ 學號 Student ID # : \_\_\_\_\_  
Quiz 3 MATH 203: Discrete Mathematics I

Solve the recurrence relation

$$a_n = (0)a_{n-1} + (9)a_{n-2} \text{ for } n \geq 2,$$

$$a_0 = -1, a_1 = -15.$$

Write your solution in the form of

$$a_n = c_1 \cdot r_1^n + c_2 \cdot r_2^n.$$

$$\text{Check code} = (c_1 + c_2 + r_1 + r_2) \bmod 10$$

**Solution.**



RecRel 8

Indicating your answer by **underlining it** or **circling it**.  
Compute the **check code** and fill it into the **box on the right**.

check code

姓名 Name : \_\_\_\_\_ 學號 Student ID # : \_\_\_\_\_  
Quiz 3 MATH 203: Discrete Mathematics I

Solve the recurrence relation

$$a_n = (1)a_{n-1} + (2)a_{n-2} \text{ for } n \geq 2,$$

$$a_0 = 15, a_1 = 0.$$

Write your solution in the form of

$$a_n = c_1 \cdot r_1^n + c_2 \cdot r_2^n.$$

$$\text{Check code} = (c_1 + c_2 + r_1 + r_2) \bmod 10$$

**Solution.**



RecRel 9

Indicating your answer by **underlining it** or **circling it**.  
Compute the **check code** and fill it into the **box on the right**.

check code

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Quiz 3 MATH 203: Discrete Mathematics I

Solve the recurrence relation

$$a_n = (7)a_{n-1} + (-12)a_{n-2} \text{ for } n \geq 2,$$

$$a_0 = 0, a_1 = -9.$$

Write your solution in the form of

$$a_n = c_1 \cdot r_1^n + c_2 \cdot r_2^n.$$

Check code =  $(c_1 + c_2 + r_1 + r_2) \bmod 10$

**Solution.**



Indicating your answer by **underlining it** or **circling it**.  
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