**Patterns and Relations  
Unit 1 Line Master 3a**

Comparing Linear Patterns

Answers

1. a) Each expression represents a linear pattern.  
For each pattern, complete the table of values.

A: 2*x* + 2 B: 3*x* + 2

|  |  |
| --- | --- |
| ***x*** | **2*x* + 2** |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

|  |  |
| --- | --- |
| ***x*** | **3*x* + 2** |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

C: 4*x* + 2

|  |  |
| --- | --- |
| ***x*** | **4*x* + 2** |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

**Patterns and Relations  
Unit 1 Line Master 3b**

Comparing Linear Patterns (cont’d)

Answers

b) Graph each pattern on the grid provided. Join each set   
 of points with a line.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| *y* |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | *x* |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

c) How do the expressions compare?   
How do the lines on the graph compare?

**Patterns and Relations  
Unit 1 Line Master 3c**

Comparing Linear Patterns (cont’d)

Answers

2. a) Each expression represents a linear pattern.  
For each pattern, complete the table of values.

A: 3*x* + 1 B: 3*x* + 3

|  |  |
| --- | --- |
| ***x*** | **3*x* + 1** |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

|  |  |
| --- | --- |
| ***x*** | **3*x* + 3** |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

C: 3*x* + 5

|  |  |
| --- | --- |
| ***x*** | **3*x* + 5** |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

**Patterns and Relations  
Unit 1 Line Master 3d**

Comparing Linear Patterns (cont’d)

Answers

b) Graph each pattern on the grid provided. Join each set   
 of points with a line.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| *y* |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | *x* |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

c) How do the expressions compare?

How do the lines on the graph compare?