Answers

Answers

**Algebra   
Unit 1 Line Master 5e**

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 | 2 |
| 1 | 4 |
| 2 | 6 |
| 3 | 8 |

|  |  |
| --- | --- |
| ***x*** | **3*x* + 2** |
| 0 | 2 |
| 1 | 5 |
| 2 | 8 |
| 3 | 11 |

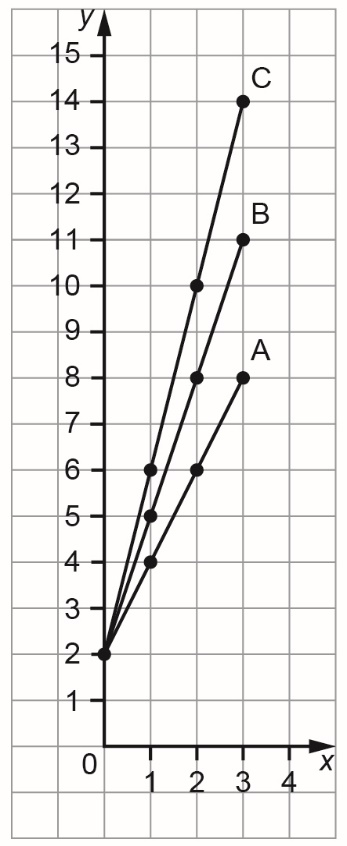
C: 4*x* + 2

|  |  |
| --- | --- |
| ***x*** | **4*x* + 2** |
| 0 | 2 |
| 1 | 6 |
| 2 | 10 |
| 3 | 14 |

Answers (cont’d)

Answers

**Algebra   
Unit 1 Line Master 5f**

b) Graph each pattern on the grid

provided. Join each set of points

with a line.

c) How do the expressions compare?   
How do the lines on the graph   
compare?  
The expressions have the same   
constant term, 2, but different   
coefficients of *x*.

Each graph starts at the point   
(0, 2) and the points move up   
as you move right.  
The constant term tells you   
the initial value.  
The steepness of each line   
is different.  
Pattern C has the steepest line.  
For A: every time *x* increases   
by 1, *y* increases by 2.  
For B: every time *x* increases  
by 1, *y* increases by 3.  
For C: every time *x* increases  
by 1, *y* increases by 4.  
The coefficient of *x* tells you   
the constant change.

Answers (cont’d)

Answers

**Algebra   
Unit 1 Line Master 5g**

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 |
| 1 | 4 |
| 2 | 7 |
| 3 | 10 |

|  |  |
| --- | --- |
| ***x*** | **3*x* + 3** |
| 0 | 3 |
| 1 | 6 |
| 2 | 9 |
| 3 | 12 |

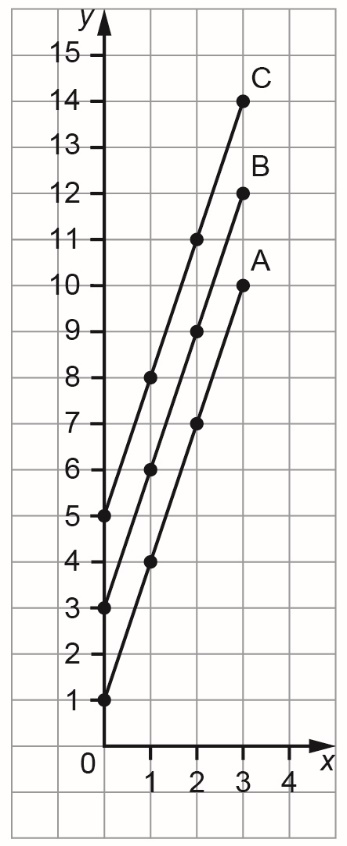
C: 3*x* + 5

|  |  |
| --- | --- |
| ***x*** | **3*x* + 5** |
| 0 | 5 |
| 1 | 8 |
| 2 | 11 |
| 3 | 14 |

Answers (cont’d)

Answers

**Algebra   
Unit 1 Line Master 5h**

b) Graph each pattern on the grid

provided. Join each set of points

with a line.

c) How do the expressions compare?

How do the lines on the graph   
compare?  
The expressions have the same   
coefficient of *x*, 3,but different   
constant terms.

Each line starts at a different  
point on the vertical axis.  
The constant term tells you  
the initial value.  
The points on each graph move   
up as you move right.  
Every time *x* increases   
by 1, *y* increases by 3.  
The lines all have the same   
steepness.   
They are parallel.  
The coefficient of *x* tells you   
the constant change.