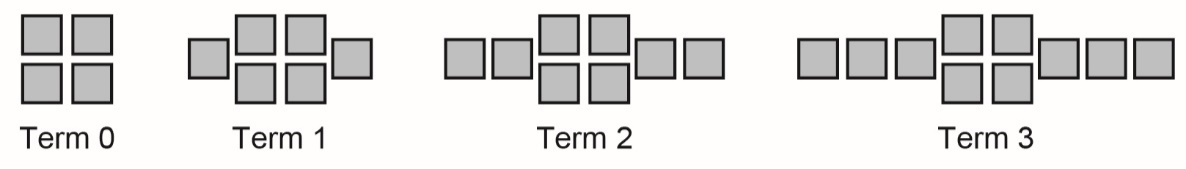
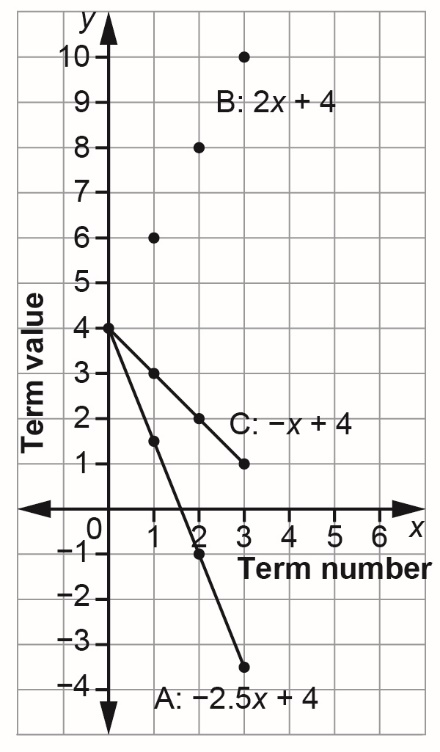
**Patterns and Relations   
Unit 1 Line Master 1d**

Answers

1. a) Each pattern is shown as an expression and in another form.  
Complete the table of values for pattern B.  
Add graphs of patterns B and C to the graph of pattern A.

B: 2*x* + 4

|  |  |
| --- | --- |
| **Term number, *x*** | **Term value, *y*** |
| 0 | 4 |
| 1 | 6 |
| 2 | 8 |
| 3 | 10 |



C: –*x* + 4

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

**Patterns and Relations   
Unit 1 Line Master 1e**

Answers (cont’d)

b) How do the expressions compare?

How do the graphs compare?

Each expression has a constant term of 4.

They all have different coefficients of *x*.

The graphs all have the same initial point (0, 4).

Two of the graphs are lines that slope down to the right.

The graph of Pattern B is a series of dots that lie along

a line that slopes up to the right.

2. a) Each expression represents a pattern.

For each pattern, complete the table.

A: –2*x* B: –2*x* + 2

|  |  |
| --- | --- |
| ***x*** | ***–*2*x*** |
| 0 | 0 |
| 1 | −2 |
| 2 | −4 |
| 3 | −6 |

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

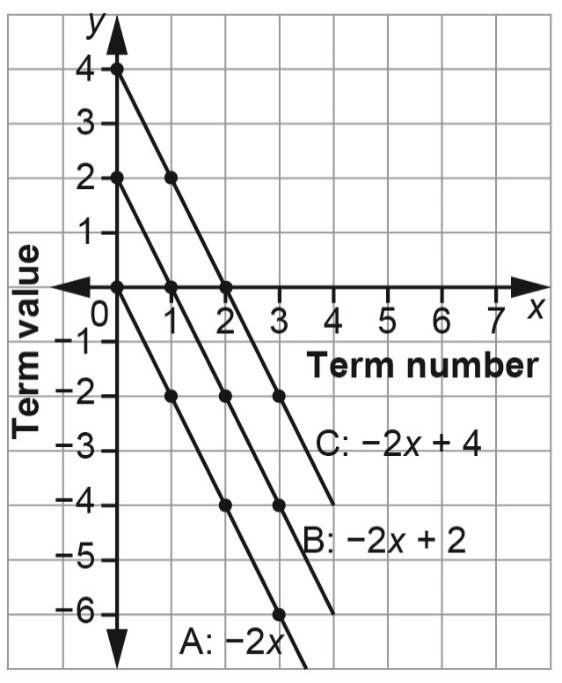
C: –2*x* + 4

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

**Patterns and Relations   
Unit 1 Line Master 1f**

Answers (cont’d)

b) Graph each pattern on the grid below.  
You can join each set of points with a line.



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

Each expression has a different constant term.   
They all have the same coefficient of *x*, which is –2.  
The graphs all have different initial points.  
All the graphs are lines that slope down to the right   
and have the same steepness. They are parallel.