Answers

**Algebra
Unit 1 Line Master 1d**

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 |

 Answers (cont’d)

**Algebra
Unit 1 Line Master 1e**

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 straight lines that slope down to the right.

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

 a straight 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 |

 Answers (cont’d)

**Algebra
Unit 1 Line Master 1f**

b) Graph each pattern on the grid provided on the next page.
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 straight lines that slope down to the right
and have the same steepness. They are parallel.