Name_____ Date_____

Algebra
Unit 1 Line Master 5e

Answers

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

A: $2x + 2$

x	$2x + 2$
0	2
1	4
2	6
3	8

B: $3x + 2$

x	$3x + 2$
0	2
1	5
2	8
3	11

C: $4x + 2$

x	$4x + 2$
0	2
1	6
2	10
3	14

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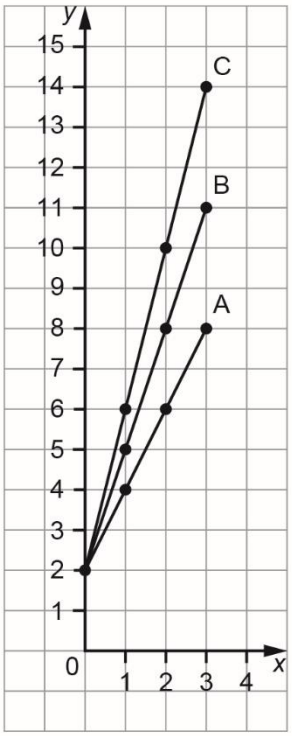
Answers (cont'd)

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.

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Answers (cont'd)

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

A: $3x + 1$

x	$3x + 1$
0	1
1	4
2	7
3	10

B: $3x + 3$

x	$3x + 3$
0	3
1	6
2	9
3	12

C: $3x + 5$

x	$3x + 5$
0	5
1	8
2	11
3	14

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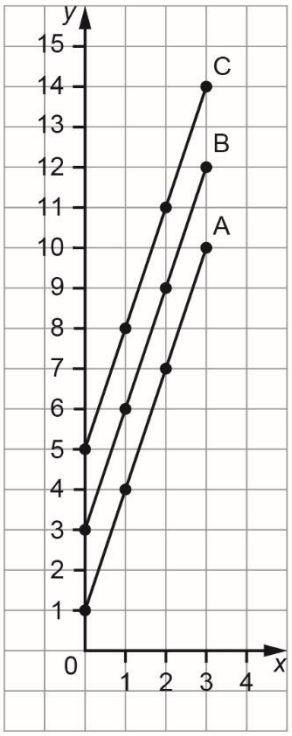
Algebra
Unit 1 Line Master 5h

Answers (cont'd)

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.