Name________________________________ Date_____________________

Patterns and Relations
Unit 1 Line Master 2d

Investigating Equivalency Answers

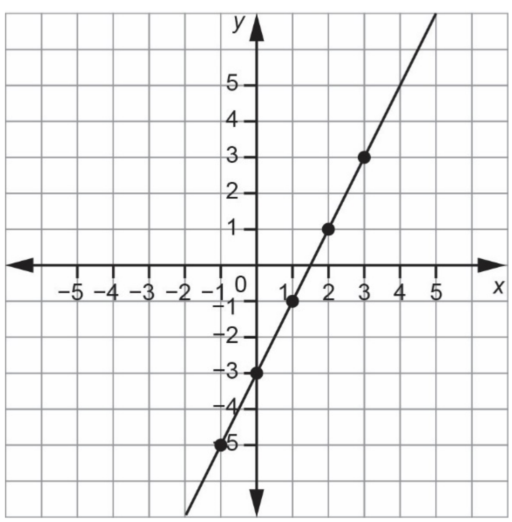
1. a)

x	**2*x* – 3**
–1	**2(–1) – 3 = –5**
0	**2(0) – 3 = –3**
1	**2(1) – 3 = –1**
2	**2(2) – 3 = 1**
3	**2(3) – 3 = 3**

x	**–3 + 2*x***
–1	**–3 + 2(–1) = –5**
0	**–3 + 2(0) = –3**
1	**–3 + 2(1) = –1**
2	**–3 + 2(2) = 1**
3	**–3 + 2(3) = 3**

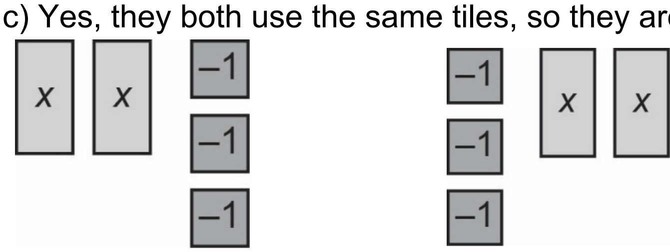
The polynomials are equivalent as they have the same values.

b)



Both graphs are the same,
so the expressions are equivalent.

c) Yes, they both use the same tiles, so they are equivalent.



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Name________________________________ Date_____________________

Patterns and Relations
Unit 1 Line Master 2e

Investigating Equivalency Answers (cont'd)

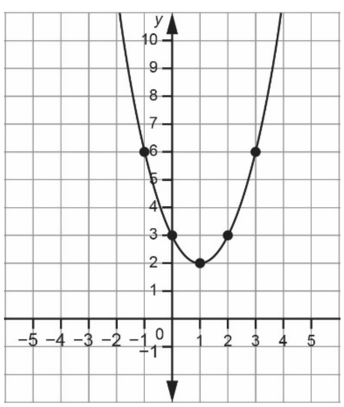
2. a)

x	$x^2 - 2x + 3$
-1	$(-1)^2 - 2(-1) + 3 = 6$
0	$(0)^2 - 2(0) + 3 = 3$
1	$(1)^2 - 2(1) + 3 = 2$
2	$(2)^2 - 2(2) + 3 = 3$
3	$(3)^2 - 2(3) + 3 = 6$

x	$-2x + x^2 + 3$
-1	$-2(-1) + (-1)^2 + 3 = 6$
0	$-2(0) + (0)^2 + 3 = 3$
1	$-2(1) + (1)^2 + 3 = 2$
2	$-2(2) + (2)^2 + 3 = 3$
3	$-2(3) + (3)^2 + 3 = 6$

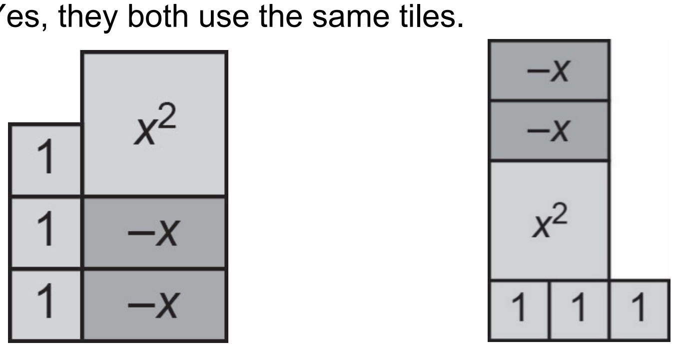
The polynomials are equivalent as they have the same values.

b)



Both graphs are the same,
so the expressions are equivalent.

c) Yes, they both use the same tiles.



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Patterns and Relations
Unit 1 Line Master 2f

Investigating Equivalency Answers (cont'd)

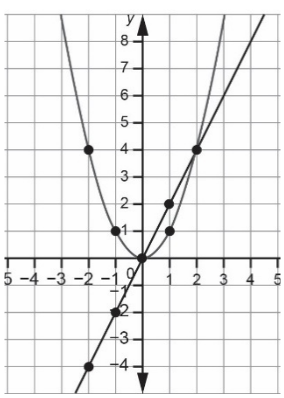
3. a)

x	x^2
–2	**4**
–1	**1**
0	**0**
1	**1**
2	**4**

x	$2x$
–2	**–4**
–1	**–2**
0	**0**
1	**2**
2	**4**

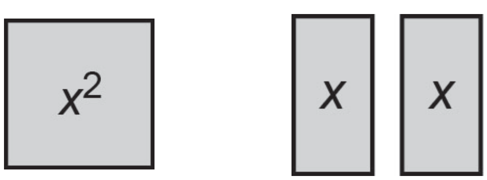
The polynomials are not equivalent as they do not have the same values.

b)



The graphs are different,
so the expressions are not equivalent.

c)



x^2 $2x$

d) Alike: The graphs of both polynomials pass through the points (0, 0) and (2, 4).
Different: The tiles used to model the polynomials are different sizes and shapes.
The graph of x^2 is a curve. The graph of $2x$ is a line.

These are not equivalent polynomials.

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