Welcome to 3UI

Our Class is using an E-book this semester!

Access will be through our Google Classroom.

6e7q53l

MCR 3UI-07   Block E: Spring 2018

Today's Learning Goal(s):

Date: __Feb.5/18__
(**Every** lesson)

By the end of the class, I will be able to:
a) determine whether polynomial expressions are equivalent.

2.1 Adding & Subtracting Polynomials

As we are starting with Chapter 2, you will notice a strange notation that the text uses:

ie. $f(x) = 2x + 7$

This is called FUNCTION NOTATION and we will be learning about it in our next unit. For now, just replace the $f(x)$ with a y. The function above then becomes:

$$y = 2x + 7$$

Equivalency - when comparing 2 different functions, we say they are equivalent if __they both simplify to the same expression__ , OR, __they both evaluate to the same number when substituting the same value__ __into both expressions. (*avoid using zero*)__

Note: Substituting a number in, is enough to prove inequality, but __not to show equality__. Sometimes two equations will be equal at one number but not another. Expanding and simplifying will always show equality.

Ex.1 Are the following functions equivalent? Foil   (Use 2 different methods)

$f(x) = 4x^2 + 8x + 3$ $g(x) = (2x+3)(2x+1)$

1) **expand and simplify**

2) **sub $x = -1$ into both**

$= 4x^2 + 2x + 6x + 3$
$= 4x^2 + 8x + 3$

Remember:
Let $y_1 = 4x^2 + 8x + 3$

Let $y_2 = (2x+3)(2x+1) + 8x + 3$

$0 = (2x+3)(2x+1)$

3) **we could graph both functions; if equivalent their graphs would be the same**

$4x^2 + 8x + 3$ $(2x+3)(2x+1)$

$= 4(x^2 + 2x) + 3$

$= 4(x^2 + 2x + 1 - 1) + 3$

$2x + 3 = 0$

$= 4(x+1)^2 + 4(-1) + 3$

$x = -\frac{3}{2}$

$= 4(x+1)^2 - 4 + 3$

$2x + 1 = 0$

$= 4(x+1)^2 - 1$

$x = -\frac{1}{2}$

$\therefore \cup (-1, -1)$

AϕS: $x = \dfrac{-\frac{3}{2} + \left(-\frac{1}{2}\right)}{2}$

$x = -1$

Let $y_1 = 4x^2 + 8x + 3$

$= -\frac{4}{\frac{2}{2}}$

$= 4(-1)^2 + 8(-1) + 3$

$= -1$ if $x = -1$ $y = (2x+3)(2x+1)$

$= 4(1) - 8 + 3$

$= (2(-1)+3)(2(-1)+1)$

$= 4 - 8 + 3$

Let $y_2 = (2x+3)(2x+1)$

$= (-2+3)(-2+1)$

$= -1$

$= (2(-1)+3)(2(-1)+1) = (-2+3)(-2+1)$

$= (2+3)(-2+1)$

$= (1)(-1)$

$= (1)(-1)$

$= -1$

$= -1$ $\therefore \cup (-1, -1)$

Today's Homework Practice includes:

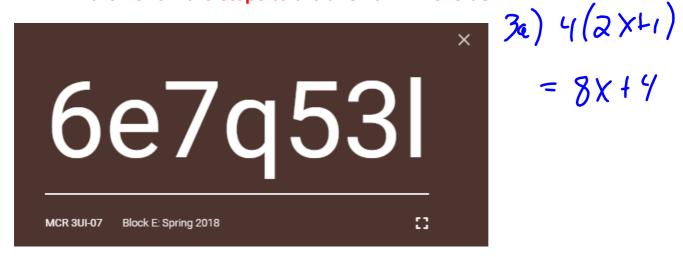*Return Student Info Sheet before beginning homework.*

Sign and **RETURN** the cover sheet with email address PRINTED.

p. 82   #1 – 6

pp. 88-89   #(4 – 6, 8)ac   (ignore funcon notaon)

Look ahead to 2.2 on Website.

**Note: I always expect you to write the question,
then show the steps to the answer. This is 3U !!**

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3a) $4(2x+1)$

$= 8x + 4$

Attachments

billy7.wav