

**Objectives:**

- Students will divide positive integers from the multiplication table without remainders, as evidenced by them passing one-minute quizzes.
- Students will represent polynomials using Algeblocks, as evidenced by them completing a warm-up worksheet where they do so.
- Students will review for the upcoming comprehensive test, as evidenced by them completing an in-class practice test.

**Materials:**

- “Minute Quiz 4-9” for each student
- “Warm-up 4-9” for each student
- “Unit 4 Comprehensive Test Practice” for each student
- “Unit 4 Calendar” transparency

**Do Now:**

- Park stuff
- Work on warm-up
- Get ready for minute quiz

**Homework:**

- Study for test on Friday!
- 6 hours of ALEKS due Friday

Time	Activity
Before Bell	<p style="text-align: center;"><b>AGENDA, DO NOW, AND WARM-UPS</b></p> <p>Write the <b>agenda</b> and the <b>do now</b> on the board. As students enter the classroom, shake their hands, give them a copy of the <b>warm-up</b>, and direct them to follow the directions listed for the “do now.”</p>
10 min	<p style="text-align: center;"><b>MINUTE QUIZ, WARM-UPS, ATTENDANCE, AND HOMEWORK COLLECTION</b></p> <p><b>Minute Quiz and Warm-up</b> When the bell rings, quickly go around and put the <b>minute quiz</b> on each student’s desk, face down. Then, start everyone on the quiz at the same time and give everyone one minute. Students should work on the warm-up when they’re done with the minute quiz. After the minute is over, have a student collect the minute quizzes and give them to the teacher’s aide (TA) to grade.</p> <p><b>Attendance and Collect Homework</b> While students work on the warm-up, take <b>attendance</b> and have the TA collect <b>homework</b> &amp; stamp homework checkers.</p>
5 min	<p style="text-align: center;"><b>ANNOUNCEMENTS</b></p> <p>Explain to students that you have a couple announcements to make.</p> <p><b>6 Hours of ALEKS due Friday</b> Ask students, <i>The first announcement has to do with ALEKS. This week, how many hours of ALEKS do you need to have by Friday?</i> Point to the homework assignment that indicates the answer. [Six.]</p> <p><b>Unit Calendar</b> Say: <i>The second announcement is to remind you what we’ve been doing this unit. Put the <b>unit 4 calendar</b> transparency on the overhead so that students can see it. Point to the various lessons in the unit, and explain, <i>We’ve learned how to add, subtract, multiply, and divide polynomials. And, that’s it! So, we’re going to have a test on Friday. When is the test? [Friday.] Today, we are going to review by taking a practice test. What are we doing today? [Review.]</i></i></p>
30 min	<p style="text-align: center;"><b>PRACTICE TEST</b></p> <p>Hold up a practice test packet, saying, <i>Each of you are going to get one of these practice test packets. This is an actual version of the test. So, the test on Friday will be exactly like it, except different numbers and such. So, I’m telling you exactly what will be on the test. You can whisper quietly with your table partner to work on the practice test. When you’re finished, get it checked by me or the TA, and we will give you permission to work on ALEKS.</i></p>

Lesson 4-9 – Unit 4 Review

30 min	<p style="text-align: center;"><b>ALEKS</b></p> <p>When students finish the practice comprehensive test and get them checked by the teacher or the TA, they can get a laptop to work on ALEKS.</p>
5 min	<p style="text-align: center;"><b>CLEAN UP</b></p> <p>Students must check the laptops with the teacher or the TA before putting them away. After putting the laptops away, students should pack up, sit in their seats, and wait to be dismissed by the teacher (not by the bell).</p>

**Solve the following division problems. You have exactly one minute!**

$7 \div 1 =$

$36 \div 12 =$

$110 \div 11 =$

$99 \div 11 =$

$6 \div 1 =$

$44 \div 11 =$

$36 \div 4 =$

$15 \div 5 =$

$11 \div 1 =$

$88 \div 8 =$

$40 \div 5 =$

$48 \div 12 =$

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$48 \div 12 =$

**Solve the following division problems. You have exactly one minute!**

$36 \div 9 =$

$44 \div 4 =$

$10 \div 1 =$

$7 \div 7 =$

$50 \div 5 =$

$60 \div 10 =$

$36 \div 9 =$

$16 \div 4 =$

$16 \div 8 =$

$12 \div 12 =$

$100 \div 10 =$

$110 \div 11 =$

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**Solve the following division problems. You have exactly one minute!**

$66 \div 11 =$

$24 \div 12 =$

$30 \div 10 =$

$20 \div 5 =$

$1 \div 1 =$

$84 \div 12 =$

$4 \div 1 =$

$48 \div 8 =$

$4 \div 1 =$

$30 \div 10 =$

$121 \div 11 =$

$16 \div 8 =$

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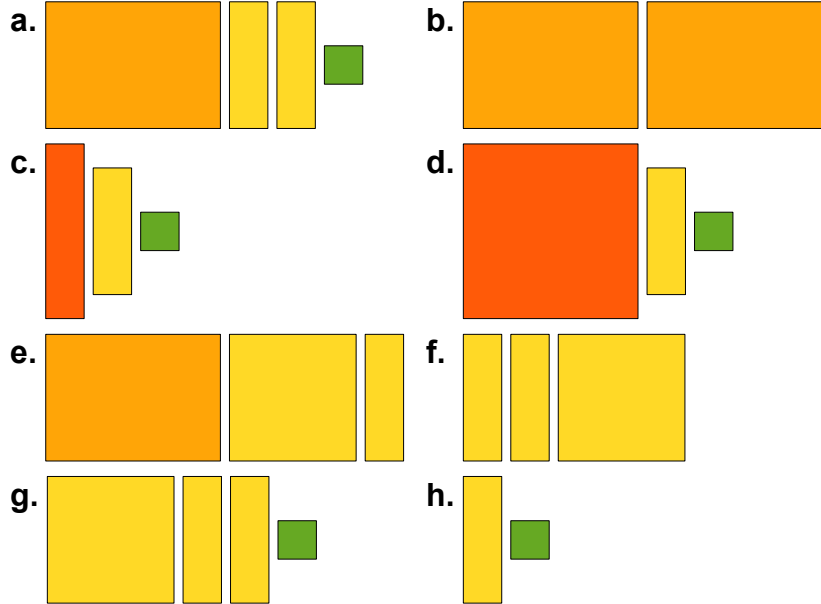
$30 \div 10 =$

$121 \div 11 =$

$16 \div 8 =$

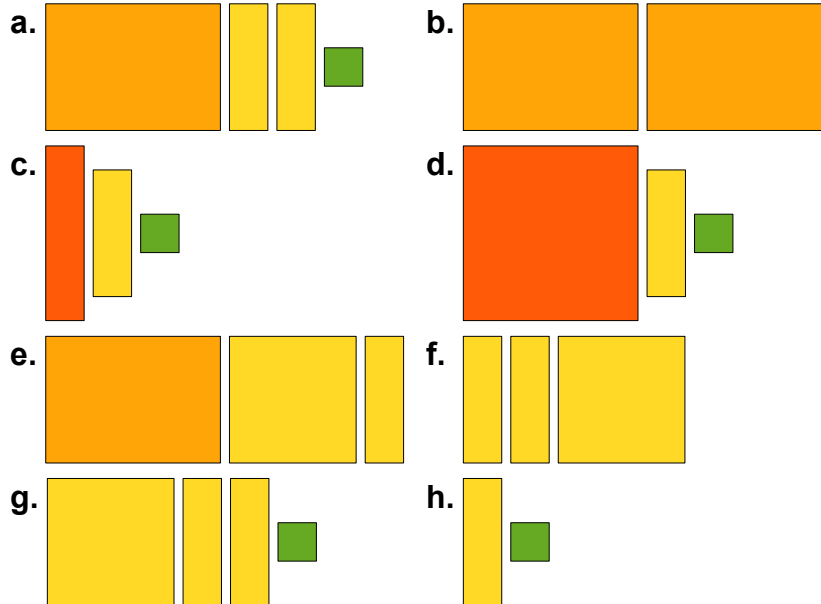
Match each polynomial with the set of Algeblocks that represent it.

1.  $x + y + 1$  \_\_\_\_\_
2.  $y^2 + x + 1$  \_\_\_\_\_
3.  $xy + x^2 + x$  \_\_\_\_\_
4.  $2xy$  \_\_\_\_\_
5.  $2x + x^2$  \_\_\_\_\_
6.  $x^2 + 2x + 1$  \_\_\_\_\_
7.  $x + 1$  \_\_\_\_\_
8.  $xy + 2x + 1$  \_\_\_\_\_



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5.  $2x + x^2$  \_\_\_\_\_
6.  $x^2 + 2x + 1$  \_\_\_\_\_
7.  $x + 1$  \_\_\_\_\_
8.  $xy + 2x + 1$  \_\_\_\_\_



## Unit 4 Comprehensive Test

Numeracy • 2008-2009  
Mr. Wong

Read and sign the honor code below:

I, \_\_\_\_\_, swear on my honor that:  
Yo, \_\_\_\_\_, doy mi palabra de honor que:

- All of the work on this test is all mine. I did not copy any other student's work or ask any student for help.  
*Todo el trabajo en este examen es mío. Yo no lo copie de ningún otro estudiante o pedí ayuda de otro estudiante.*
- I did not allow any other student to look at my paper and copy my work.  
*No le permití a ningún otro estudiante ver mi examen ni copiar mi trabajo.*
- I will not have a cell phone or any electronic device anywhere on my person. This includes no cell phone or electronic device in my pockets, lap and clothing or any other area around my desk.  
*No tendré un celular disponible en mi persona o en ningún otro lugar.*
- I will not communicate with other students in any way during the two hours of this test. This means I will not talk, pass notes, whisper, make hand signals, or anything else that a teacher may interpret as communication.  
*No me comunicaré con ningún otro estudiante de ninguna manera durante estas dos horas de exámenes. Esto quiere decir que no hablaré, pasaré notas, soplaré, haré señas con mis manos o cualquier otra cosa que el/ la maestro(a) pueda interpretar como comunicación.*

I realize that if I break any of the rules my test will be taken away and I will be given a 0.  
*Yo reconozco que si no sigo estas reglas me quitarán el examen y recibiré un 0.*

\_\_\_\_\_  
Student Signature/Firma de estudiante

\_\_\_\_\_  
Date/Fecha

**You must show your work for credit!**

### Numeracy Unit 4 Comprehensive Test

Name: \_\_\_\_\_  
Date: \_\_\_\_\_ Period: \_\_\_\_\_

- 1 What does the following Algeblock represent?



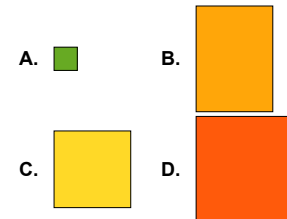
- A 1  
B x  
C y  
D  $x^2$

- 2 What does the following Algeblock represent?



- A  $x^2$   
B  $y^2$   
C xy  
D 1

- 3 Which Algeblock represents  $xy$ ?



- 4 What is the width and height of the following Algeblock?



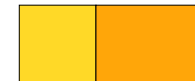
- A width: x, height: y  
B width: 1, height: y  
C width: y, height: 1  
D width: 1, height: x

- 5 What is the width and height of the following Algeblock?



- A width: 1, height: x  
B width: x, height: x  
C width: 1, height: 1  
D width: y, height: y

- 6 What is the perimeter of the following configuration of Algeblocks?



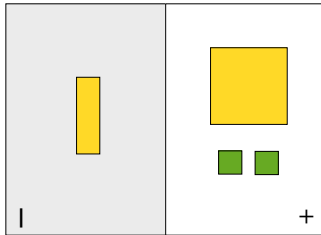
- A  $4x + 2y$   
B  $5x + 2y$   
C  $2x + 2y$   
D  $2x + 4y$

7 What is the perimeter of the following configuration of Algeblocks?



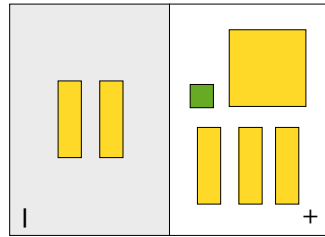
- A  $4x + 3$
- B  $4x + 2$
- C  $3x + 3$
- D  $3x + 2$

8 What polynomial does the following basic mat represent?



- A  $x^2 - x + 2$
- B  $-x^2 + x + 2$
- C  $-x^2 + x - 2$
- D  $x^2 - x - 2$

9 The following basic mat shows  $x^2 + 3x - 2x + 1$ . Simplify this polynomial.



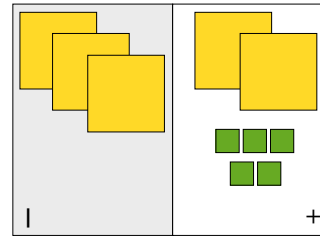
- A  $x^2 + 5x + 1$
- B  $x^2 - x + 2$
- C  $x^2 + x + 1$
- D  $x^2 - 5x + 1$

10 Simplify  $4 - 3x^2 + 2 - 2x^2$ . Show your work by drawing on the following basic mat.



- A  $2 + 5x^2$
- B  $6 + x^2$
- C  $-x^2 + 6$
- D  $-5x^2 + 6$

11 The following basic mat shows  $(3 + 2x^2) + (2 - 3x^2)$ . What is the answer to this addition problem?



- A  $5x^2 + 5$
- B  $5(x^2 + 1)$
- C  $x^2 + 5$
- D  $-x^2 + 5$

12 Evaluate  $(x - 1) + (2x + 3)$ . Show your work by drawing on the following basic mat.



- A  $x + 2$
- B  $3x + 2$
- C  $x - 2$
- D  $3x - 2$

13 Evaluate  $(x - y) + (2x + 2y)$ . Show your work by drawing on the following basic mat.



- A  $3x + 3y$
- B  $x + y$
- C  $3x + y$
- D  $x + 3y$

14 Write the following subtraction problem as an addition problem:

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

- A  $(-3x^2 - x) + (x^2 + 4x)$
- B  $(3x^2 + x) + (x^2 + 4x)$
- C  $(-3x^2 - x) + (-x^2 - 4x)$
- D  $(3x^2 + x) + (-x^2 - 4x)$

15 Write the following subtraction problem as an addition problem:

$$(2x^2 - y) - (4x^2 + 3y)$$

- A  $(-2x^2 + y) + (4x^2 + 3y)$
- B  $(2x^2 - y) + (-4x^2 - 3y)$
- C  $(-2x^2 + y) + (-4x^2 - 3y)$
- D  $(2x^2 - y) + (4x^2 + 3y)$



- 16** Evaluate  $(3x^2 + x) - (-x^2 - 4x)$ . Show your work by drawing on the following basic mat. *Hint: first rewrite the subtraction problem as an addition problem.*

-	+
-	+
+	-

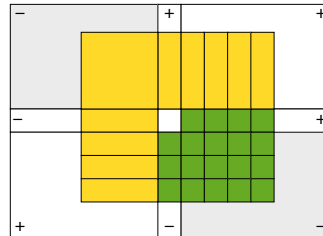
- A**  $4x^2 + 5x$   
**B**  $2x^2 - 3x$   
**C**  $2x^2 + 5x$   
**D**  $4x^2 - 3x$

- 17** Evaluate  $(2x^2 - y) - (4x^2 + 3y)$ . Show your work by drawing on the following basic mat. *Hint: first rewrite the subtraction problem as an addition problem.*

-	+
-	+
+	-

- A**  $-2x^2 - 4y$   
**B**  $-6x^2 - 4y$   
**C**  $-2x^2 + 2y$   
**D**  $-6x^2 + 2y$

- 18** The following basic mat shows  $(-x + 4) \cdot (x - 3)$ . What is the simplified answer to this multiplication problem?



- A**  $-x^2 - 11$   
**B**  $x^2 + 9x + 19$   
**C**  $-x^2 + 7x - 12$   
**D**  $x^2 + 7x + 12$

- 19** Evaluate  $(x) \cdot (-x + 1)$ . Show your work by drawing on the following basic mat.

-	+
-	+
+	-

- A**  $-x^2 + x$   
**B**  $x^2 + 3x + 1$   
**C**  $-x^2 + x + 1$   
**D**  $x^2 + x + 1$

- 20** Evaluate  $(x + 1) \cdot (-x)$ . Show your work by drawing on the following basic mat.

-	+
-	+
+	-

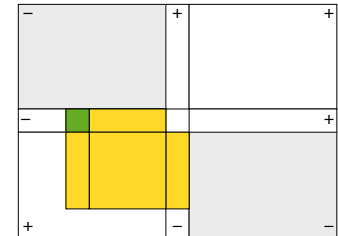
- A**  $-x^2 + x$   
**B**  $-x^2 - x$   
**C**  $1$   
**D**  $x^2 + 3x + 1$

- 21** Factor  $x^2 + x$ . Show your work by drawing on the following basic mat.

-	+
-	+
+	-

- A**  $(x + 1) \cdot (x + 2)$   
**B**  $(x) \cdot (x^2 + 1)$   
**C**  $(x + 1) \cdot (x)$   
**D**  $(x^2 + 1) \cdot (x^2)$

- 22** The following basic mat shows  $(x^2 + x) \div (-x - 1)$ . What is the simplified answer to this multiplication problem?



- A**  $-x$   
**B**  $-x - 1$   
**C**  $-x + 1$   
**D**  $x^2 + x$

- 23** Evaluate  $(2x^2 + 2x) \div (x + 1)$ . Show your work by drawing on the following basic mat.

-	+
-	+
+	-

- A**  $2x$   
**B**  $x + 1$   
**C**  $2x^2 + 2x$   
**D**  $2x^2 + 5x + 1$

