

## Math A2 Homework: Week of October 29-Nov 2

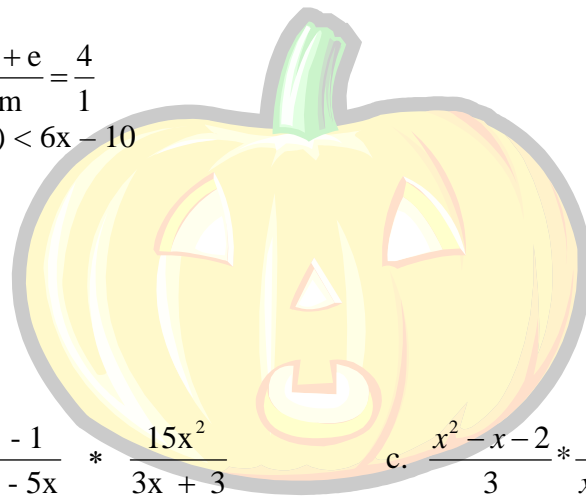
### Monday, Oct 29:

1. What value of  $x$  makes the following fractions undefined? a.  $\frac{3x}{x-6}$  b.  $\frac{a-4}{2a-18}$
2. Reduce each fraction to lowest terms:  
a.  $\frac{15x^2}{10x}$  b.  $\frac{28a^4b^5}{21a^2b^3}$  c.  $\frac{6x^3+12x^2}{3x^2}$  d.  $\frac{15x^2-5x}{6x-2}$  e.  $\frac{x^2-9}{3x+9}$
3. Factor Completely if necessary:  
a.  $6x^3+18x^2-24x$  b.  $3x^2+5x-12$
4. Represent the area of a square whose side is represented by:  $(4x-3)$
5. Christina went to the food store and purchased 5 chakita bananas and 3 smith apples and spent a total of \$3.50. Andy went to the same food store the same day and purchased 10 chakita bananas and 4 smith apples and spent a total of \$5.50. Find the cost of one banana and one apple.

### Tuesday, Oct 30

1. Reduce each fraction to lowest terms:  
a.  $\frac{x^2+2x-15}{x^2+4x-5}$  b.  $\frac{a^2-4}{2a-4}$  c.  $\frac{c^2-1}{c^2+4c+3}$  d.  $\frac{6x^2-6}{3x^2-6x+3}$  e.  $\frac{z^2+z-6}{z^2-3z+2}$
2. What is the result when  $2x^2+7x+3$  is divided by  $2x^2+6x$ ? (Hint: You have to simplify)
3. When is the following fraction undefined?  $\frac{x^2-10x+9}{3x-9}$
4. Subtract  $(4x^2-5x-3)$  from  $(6x^2+5x-4)$
5. Solve for  $m$  (Hint: You can cross multiply):  $\frac{d+e}{m} = \frac{4}{1}$
6. Solve for  $x$  and graph on a number line:  $4(x-2) < 6x-10$

### Wednesday Oct 31 → Happy Halloween



### Thursday, Nov 1

1. Multiply. Express answer in lowest terms:  
a.  $\frac{3y-3}{7} * \frac{35y}{5y-5}$  b.  $\frac{x^2-1}{5x^2-5x} * \frac{15x^2}{3x+3}$  c.  $\frac{x^2-x-2}{3} * \frac{21}{x^2-4}$   
d.  $\frac{x^2+5x+4}{7x+7} * \frac{28}{x^2-16}$  e.  $\frac{3a}{2a^2+a-3} * \frac{4a+6}{3a-6}$  (Use factor by grouping)
2. Which of the following is in lowest terms? (Multiple Choice)  
a.  $\frac{x-1}{x^2-1}$  b.  $\frac{x+1}{x^2-1}$  c.  $\frac{x}{x^2+x}$  d.  $\frac{x+1}{x^2+1}$
3. The length of a rectangle is three more than twice the width. If the width is  $x$ , what is the perimeter of the rectangle in terms of  $x$ ?
4. The area of a triangle is  $\frac{bh}{2}$ . If a triangle has base  $(2x+4)$  and height  $(x-5)$ , what is the area?
5. Solve the following system of equations using substitution:  $3x+2y=17$   
 $x=1-3y$

**Friday Nov 2nd**

1. Divide the following and express the quotient in simplest form:

a.  $\frac{15}{x^3} \div \frac{5}{x}$

b.  $\frac{2x+4}{12} \div \frac{x+2}{3}$

c)  $\frac{3y+6}{y^2+4y+4} \div \frac{3}{y+2}$

2. Multiply. Express your answer in lowest terms:

a.  $\frac{x^2+16x+64}{x^2+64} * \frac{x^3+64x}{x^2+8x}$

b.  $\frac{6x-18}{30} * \frac{5s+15}{s^2-9}$

3. When are the following fractions undefined?

a.  $\frac{3x^2-4}{4x-8}$

b.  $\frac{3x-12}{12x+3x-15}$

4. Factor completely if necessary

a.  $2x^2-3x+1$

b.  $16x^4-81$

c.  $3x^2-18x+27$

5. Solve the following equation for y:  $3y-8x=12$