

April 18, 2016  
 Exam # 3 - Friday  
 \* Factoring  
 \* Rational Expressions

Apr 18-9:07 AM

6.5  
 Factoring Special Terms  
 ① Difference of Two Squares  
 $a^2 - b^2 = (a+b)(a-b)$   
 $25x^2 - 9 = (5x+3)(5x-3)$   
 $1 - a^2 = (1+a)(1-a)$   
 $a=1 \quad b=a$   
 ② Sum & Difference of Two Cubes  
 a) Sum  
 $a^3 + b^3 = (a+b)(a^2 - ab + b^2)$   
 $x^3 + 1 = (x+1)(x^2 - x + 1)$   
 b) Difference  
 $a^3 - b^3 = (a-b)(a^2 + ab + b^2)$   
 $8 - 125y^3 = (2-5y)(4+10y+25y^2)$

Apr 18-9:12 AM

6.6 Factoring Strategies  
 ① Factor out GCF if it exists  
 ② Use ac & b method to factor trinomials of the form  $ax^2 + bx + c = 0$   
 ③ If an equation, use zero factor property to solve for variables.  
 ④ Check

Apr 18-9:22 AM

#2)  $72d^4t^4 - 242d^2t^6$   
 $GCF = 2d^2t^4$   
 $2d^2t^4(36d^2 - 121t^2)$   
 $(2d^2t^4)(6d+11t)(6d-11t)$  fully factored

Apr 18-9:27 AM

#17)  $2b^5 + 4b^4 + 2b^3$   
 $GCF = 2b^3$   
 $2b^3(b^2 + 2b + 1)$   $ac=1 \quad b=2$   
 $(b^2 + b + b + 1)$   
 $b(b+1) + 1(b+1)$   
 $2b^3(b+1)(b+1)$   
 $2b^3(b+1)^2$

Apr 18-9:33 AM

Do 6.6 #1 - #36 m3  
 \* Do 7.1 #1 - #75 m3

Apr 18-9:38 AM

7.3 Simplifying Rational Expressions

① Multiplication

$$\frac{a}{b} \cdot \frac{c}{d} = \frac{ac}{bd} \text{ R.F.}$$

$$\frac{\cancel{3}^1 6}{x^{+2}} \cdot \frac{\cancel{1}^1 x}{\cancel{10}_5} = \frac{3}{5x^2}$$

Apr 18-9:47 AM

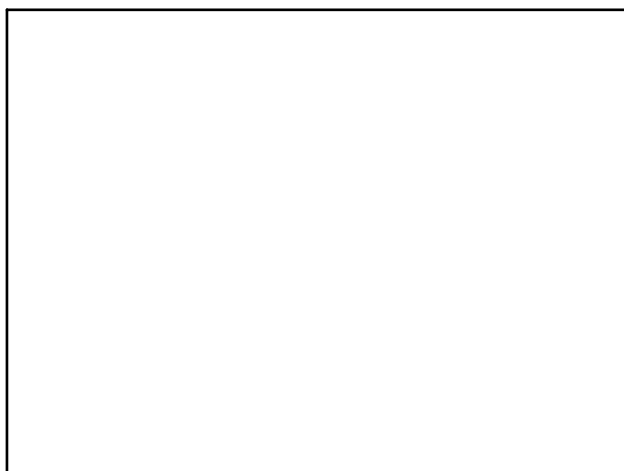
7.1 Negative Exponents

#33)  $(2x^4z^{-7})^5 = 2^5 \cdot (x^4)^5 \cdot (z^{-7})^5$

$$= 32 \cdot x^{20} \cdot z^{-35}$$

$$= \frac{32x^{20}}{z^{35}}$$

Apr 18-9:41 AM



Apr 18-9:44 AM