## 7.1 and 7.2 Evaluating and Simplifying Rational Expressions

Evaluate the following for x = 5 and y = -3

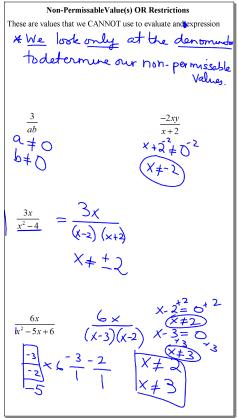
$$a)\frac{x-2xy}{y} = \frac{(5)-2\cdot(5)\cdot(-3)}{(-3)}$$

$$b)\frac{2x-4y}{3x} = \frac{2 \cdot (5) - 4 \cdot (-3)}{3 \cdot (5)}$$

$$= 22$$

$$15$$

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## **Steps for Simplifying Rational Expressions**

- 1. Factor numerator and denominator completely
- 2. State restrictions or non-permissable values
- 3. Simplify expression using rules of mathematics

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$$\frac{27a^3}{12a} = \frac{9a^2}{4}$$

$$0 \neq 0$$

$$\frac{3y^2 + 5y}{2y}$$

$$\frac{3y^4 \cdot (3y + 5)}{2y} = \frac{3y+5}{2}$$
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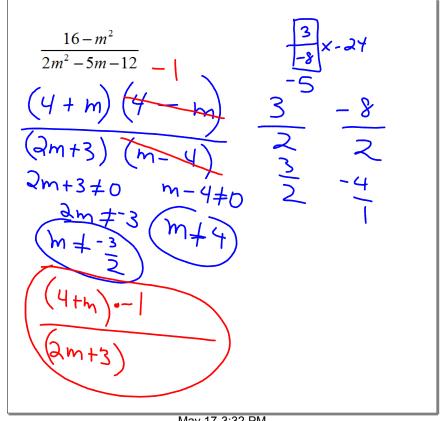
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$$\frac{x^2 - 3x - 10}{x^2 - 4}$$

$$= \frac{(x - 5)(x + 2)}{(x - 2)(x + 2)} = \frac{x - 5}{x - 2}$$

$$x + 2$$

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$$(4-m) \rightarrow -1(m-4)$$
 $(m-4)$ 

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## **Assignment:**

Pg. 402 6 odds, 11 odds

Pg. 407 2-4 odds 8

10 and 12 odds