

Math101, Sections 2 and 3, Spring 2008  
Review Sheet Solutions for Exam #2: 03-21-08

1.  $\frac{1}{4y^2z^8}$

1\*. Factor  $x^2 - 169$ . This factors as  $(x + 13)(x - 13)$ .

2.

a)  $x^2 + 4x - 21 = (x + 7)(x - 3)$ .

b)  $y^2 + 3y - 10 = (y - 2)(y + 5)$ .

c)  $a^2 + 3a - 130 = (a + 13)(a - 10)$ .

d)  $4x^2 + 32x + 28 = 4(x + 1)(x + 7)$ .

e)  $x^3 - 4x = x(x + 2)(x - 2)$ .

f)  $j^2 - j - 56 = (j + 7)(j - 8)$ .

g)  $3x^2 + 3x - 6 = 3(x + 2)(x - 1)$ .

h)  $z^3 - 2z^2 - 35z = z(z + 5)(z - 7)$ .

i)  $2x^2 - 18 = 2(x + 3)(x - 3)$ .

j)  $y^2 + 3y - 130 = (y + 13)(y - 10)$ .

k)  $z^3 - 4z^2 = z(z + 2)(z - 2)$ .

l)  $5k^2 - 20k + 225 = 5(k + 5)(k - 9)$ .

m)  $p^2 - 24p + 144 = (p - 12)^2$ .

n)  $n^2 + 14n + 49 = (n + 7)^2$ .

3.  $\{5, 60\}$ .

4. Start by putting all  $x$ 's on one side of the equation:

$$2x^2 + x - 3 = 0.$$

This factors as

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

which has  $\{1, -3/2\}$  as its solution set.

5. Solution set is  $\{5, -\frac{1}{3}\}$ .