

Math 417 Worksheet - 2/27/19

1. Finish this table!

Rules: $x^3 = e$, $y^2 = e$ $yx = x^2y$

	e	x	x^2	y	xy	x^2y
e	e	x	x^2	y	xy	x^2y
x	x	x^2	e	xy	x^2y	y
x^2	x^2	e	x	x^2y	y	xy
y	y	x^2y	xy	e		
xy	xy					
x^2y	x^2y					

So: $yx^2 = (yx) \cdot x = (x^2y) \cdot x = x^2(yx) = x^2(x^2y) = x^4y = xy$

2. Find the left and right cosets for the subgroup $\{e, y\}$