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Exercise 7.4.6:
Determine the quotient set X /∼ for each of the following equivalence relations.

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2. Let X = $\mathbb{Z}$ and define a ∼ b if and only if b - a ∈ 4$\mathbb{Z}$.

X /∼ = { [0], [1], [2], [3] } Describe equiv Classes

4. Let X = $\mathbb{R}^{\not\leq}$ and define (x,y) ∼ (a,b) if and only if one of the following holds:

x ≥ 0, y ≥ 0, a ≥ 0, b ≥ 0
x < 0, y < 0, a < 0, b < 0
xy < 0 and ab < 0.
x = 0 and y < 0 and a = 0 and b < 0.
y = 0 and x < 0 and b = 0 and a < 0.

X /∼ = { [(1,1)], [(-1,-1)], [(1,-1)], [(0,-1)], [(-1,0)] }

picture helps, but needs more description