

COP 3330 2/16/26

- 1) M- Method Overloading
W- Has-a Relationship, Class Design
F- Quiz #2
- 2) P4 due soon

Fraction

$\frac{3}{4}$ → numerator
→ denominator

2 constructors

n	16	-15	14
d	20	30	-18
	↓		
	$\frac{4}{5}$	$-\frac{1}{2}$	$\frac{-7}{9}$

den > 0
lowest terms
↳ greatest common divisor

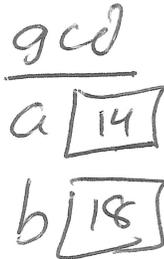
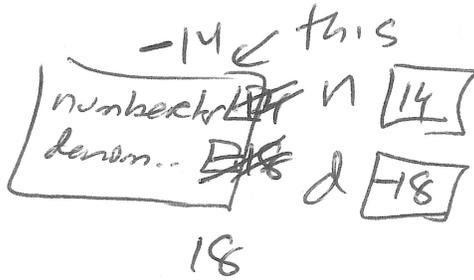
2nd constructor n = 3

$\frac{3}{1}$ → set d = 1

fraction mine = new fraction (14, -18)

main

fraction



add main

$$\frac{1}{3} + \frac{7}{6} = \frac{1 \times 2 + 7 \times 1}{3 \times 2} = \frac{27}{18}$$

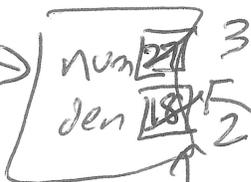
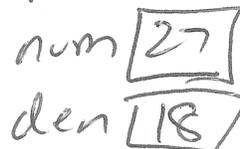
f1 → 1/3

f2 → 7/6

fraction f3 = f1.add(f2)

f3 =

add
this
f



$\frac{3}{2}$

~~f1~~ ~~(13)~~ → gets garbage collected

f2 → $\frac{7}{16}$

f1 = f1.add(f2)

2nd add method (takes in int)

f1 ~~(13)~~ $\frac{1}{3} + 4 \rightarrow \frac{13}{3}$

f1 = f1.add(4) ^{int}

$\frac{13}{3}$

f → $\frac{3}{2}$

~~power~~
~~ans~~ 4

fraction ans = f.power(4)

ans

