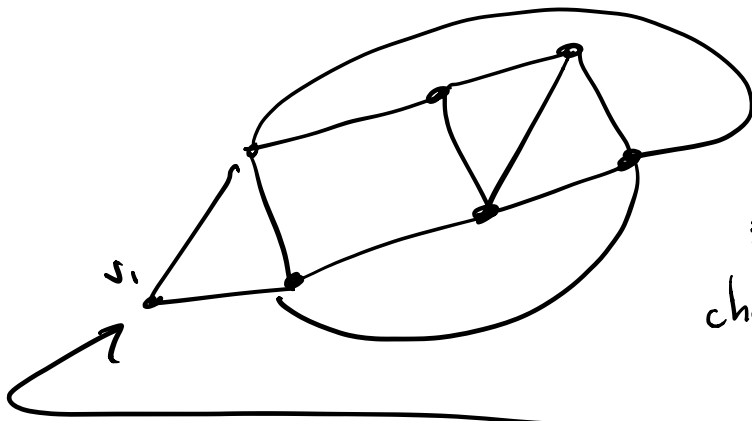Monday: Review

weekend: video on new material (contraction deletion)
but worksheet later

Exam thursday — opens around classtime as a
Sakai assignment, due ... Monday?
~1 hour long (I hope)
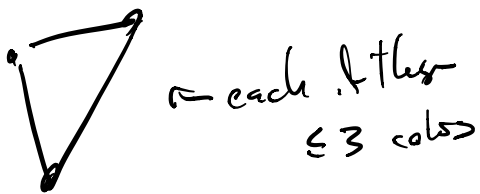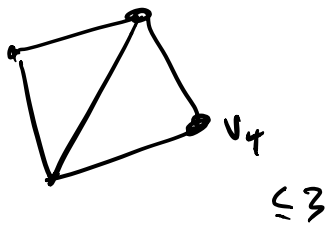
Open book – open note – closed internet.

Comment about "smarter algorithm"

G

if one vertex, color it else
choose vertex of
minimum degree

delete it, color
remay graph.
after color remay
graph, add vertex
back in, and color
it

note: some vertex has deg 2
at end, won't need more than
3 colors to color it in.

$G - v_1$

v_2

dg 3

at end,
won't
need more than
4 colors for v_2.

v_3

dg 2

≤ 3 colors

v_4

≤ 3

← each of these
≤ 3 colors
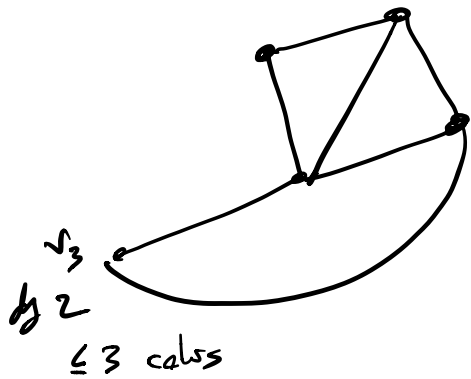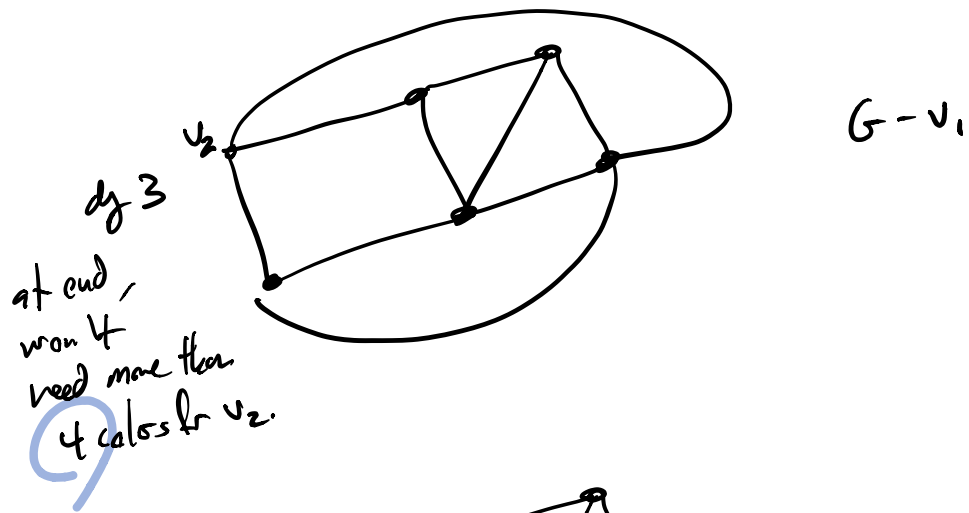
divisibility by 3 $\longrightarrow$ sum digits

2 $\longrightarrow$ check last digit

9 $\longrightarrow$ sum digits

5 $\longrightarrow$ check last digit

11 $\longrightarrow$ add up every other digit
then subtract the ones
you skipped.

143

1+3 −4

4 $\longrightarrow$ check last 2 digits

7 $\longrightarrow$ last digit + 3 times 10's place
−2 times 100's place

take 5 times last digit, and add it
to "other digits"

147 $\rightsquigarrow$ 14 + (5×7) = 49 ✓

2342 $\rightsquigarrow$ 234 + (5×2) = 244 $\rightsquigarrow$
24 + (5×4)
= 44 ✗

24728 div by 11?

(2+7+8) − (4+2) = 17 − 6 = 11 ✓

7 $\xrightarrow{\text{magic}}$ 5 ← tuthr   102

13 ~~~→ 4   10 - (5×2) = 0

17 ~~~→ -5

19 ~~~→ 2

23 ~~~→ 7   10 × 5 = 49 + 1

29 ~~~→ 3   10 × 4 = 39 + 1

31 ~~~→ -3   10 × 5 = 51 - 1

37 ~~~→ -11   10 × (-5) = (-51) + 1

                            10 × 11 = 111 - 3
                                       ↑
                                     37×3