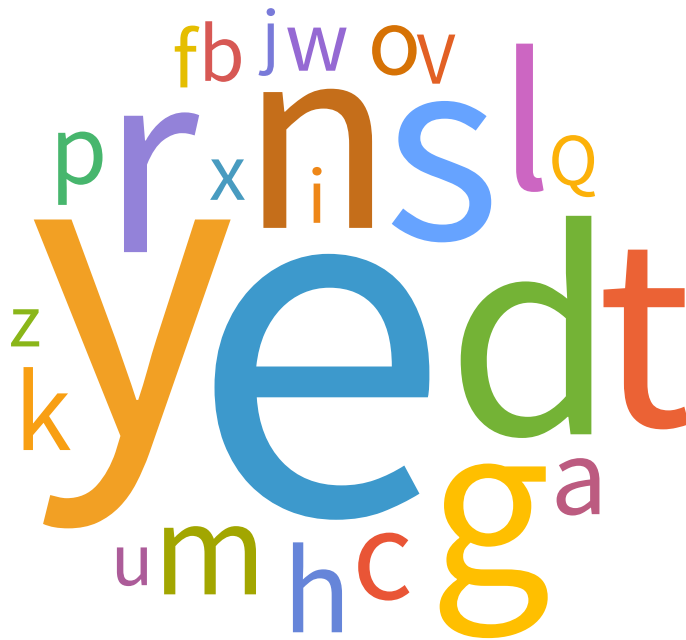


## Jeremy — PS 4 — 2025-01-29

```
In[110]:= WordCloud[StringTake[StringReverse[WordList[]], 1]]
```

Out[110]=



This looks really good.  
A couple of comments  
are on p. 8.

10/10

```
In[111]:= RomanNumeral[1959]
```

Out[111]=  
MCMLIX

```
In[112]:= Max[Table[StringLength[RomanNumeral[n]], {n, 1, 2020}]]
```

Out[112]=  
13

```
In[113]:= WordCloud[Table[StringTake[RomanNumeral[n], 1], {n, 100}]]
```

```
Out[113]=
```



```
In[114]:= Length[Alphabet["Russian"]]
```

```
Out[114]=
```

33

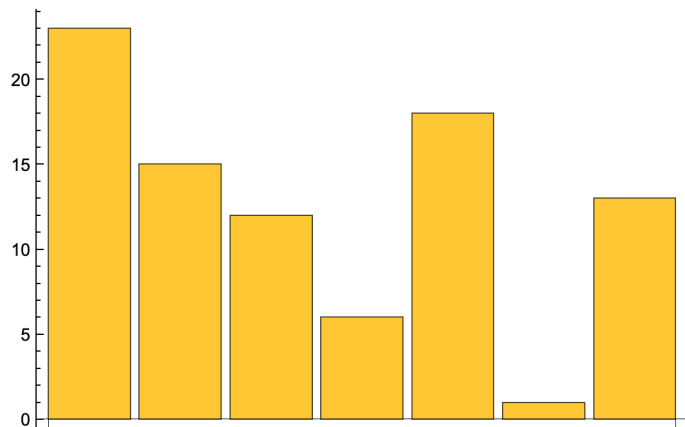
```
In[115]:= ToUpperCase[Alphabet["Greek"]]
```

```
Out[115]=
```

{A, B, Γ, Δ, E, Z, H, Θ, I, K, Λ, M, N, Ξ, O, Π, P, Σ, T, Υ, Φ, X, Ψ, Ω}

```
In[116]:= BarChart[LetterNumber["wolfram"]]
```

```
Out[116]=
```



In[117]:=

```
StringJoin[Table[FromLetterNumber[RandomInteger[{1, 26}]], 1000]]
```

Out[117]=

```
bqktspdkcevjfzrbqaajyxfxwuneroqtypauzjiqfvcotaaavtkptpczzbgjnwjdjgwebdrhewpzamnbyle  
rhtdwuteipqeelfjhhiuhryxmstmjigemdjwtpnwbivpwrnriloifjownwniwatcabmodewqfdvkm  
abjpvsnardvwpwczgvkjjoajyvnaalakvrdegduvwshygegrocjhcuntxgybiduzdgtfyyvdbkgkgmoq  
vbmlsaumpyfqdnwatsipspkjvhhllyguglxanuqktqovvxqjgtconnpadaxauqyfqnbkckqlqifxwa  
dsvxrxqjzphahchftslhogizibxasxinclajigzjxcvhludogzqvqekonpmqjjfgyqkxgnjrdifhgpa  
jzlthnsstggezfvwifpzhohqvxykqitsrhihwtssdlzawydumlfamsoszyllantgypkdchziqzbu  
otfwsgseqpvezgmpahiyiciaskqrazvrxbfiucjeaccekqkqszkysmcaczjhhlbizelrxjvtcgnwe  
efvargkjjvjwxfpinmphyfvqwhydkbsxszytlexrwpjurkibodpqgonbbiqvydtfqishhwtlxtdzi  
rwyafvxppogklvtcshxxybcrrskxirylaazumneofjupzreiofjoryasbsawcjpoulgsktihudrfzga  
nrvxoslsrobetkdrulqkpusfhtvsmjmbagbthwgrperozasqdhwbjxxghkcijjeedjspwnhurobuo  
fqbrgodiuucxsukvrzxkdbbqitcfvqkdnadhkqijdfjbtccgrabtbctlikvkumslhsuzzzikuoqlrns  
yyzbntzfunjwdnqvnjdxdvplmmaicovkbptlieiztuycrcrgwldeltdgtwwtohnxcalfycwfsbwvfin  
yevtolusuzrwluglbvfysyseeznrtajridkbggokhioyvgjuuvrwlmpajnsb
```

In[118]:=

```
Table[StringJoin[Table[FromLetterNumber[RandomInteger[{1, 26}]], 5]], 100]
```

Out[118]=

```
{otmkm, kuawf, ixhvs, casnd, uqrgh, vvvxs, enhzz, bbdlb, lzocd, idevw, yjqwt, calqs,  
ghgfm, duiav, scpxh, njfed, vzchg, zwpij, rdswy, npukm, bgjdw, lblaw, xzznh,  
vgugt, fzgmh, ndyhu, kmcol, ajhzw, xhter, znnsx, fgtgy, vgphh, glujd, izedy,  
seezv, ywqne, qtpzw, hiujy, jljlh, rlpil, rtpix, rggfj, ndxrp, bmvvu, bsajr,  
cpojv, vexsz, rkmwr, fnqao, uvmie, wvcsn, khmvo, hppqh, wdwgh, zijxh, uqcxu,  
abuil, gzyyy, undom, ydjlh, amhqz, vkzpc, jerhz, vttor, zmjrl, vjjum, mbyux,  
sjvfr, stdge, cratj, ifwnm, zxmjk, ljmml, xajvb, sdmju, xqcfu, gjcsq, ncgkb,  
shqrr, yjflg, fwwhr, kyyux, jrrou, kboom, bwtqh, dtogh, rzriv, hamoc, ueenp,  
obllw, apkuf, vnwpg, ocwlq, fmhws, zurrt, vlemg, guabc, isbli, xsugq, fdpzp}
```

In[119]:=

```
Transliterate["wolfram", "Greek"]
```

Out[119]=

βολφραμ

Nice use of RandomInteger[]. Lots of people just did RandomInteger[26], which includes 0, and they have spaces in their words.

In[120]:=

```
StringJoin[Table["🐶", 10]] (*For some reason my Mathematica has  
difficulty processing Emoji characters. This was the best I could manage.*)
```

Out[120]=



I messed around with natural language interpretations in my solution and got it to cough up the right emojis.

In[121]:=

```
Transliterate[Alphabet["Arabic"]]
```

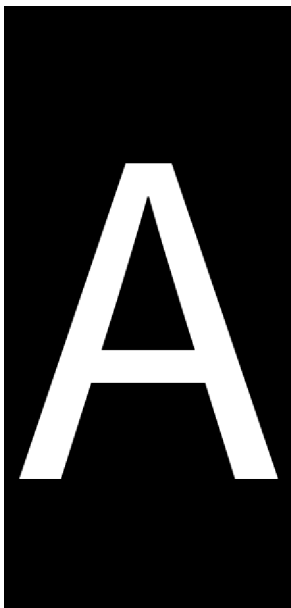
Out[121]=

```
{a, b, t, th, j, h, kh, d, dh, r, z, s, sh, s, d, t, z, ' , gh, f, q, k, l, m, n, h, w, y}
```

In[122]:=

`ColorNegate[Rasterize[Style["A", 200]]]`

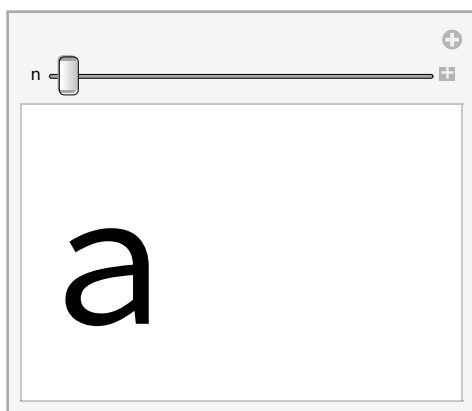
Out[122]=



In[123]:=

`Manipulate[Style[FromLetterNumber[n], 100], {n, 1, 26, 1}]`

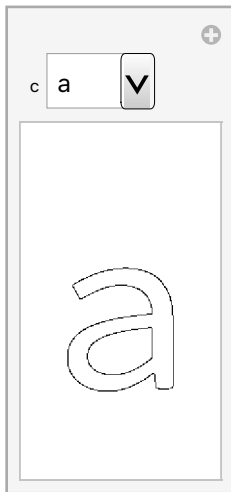
Out[123]=



In[124]:=

```
Manipulate[ColorNegate[EdgeDetect[Rasterize[Style[c, 100]]]], {c, Alphabet[]}]
```

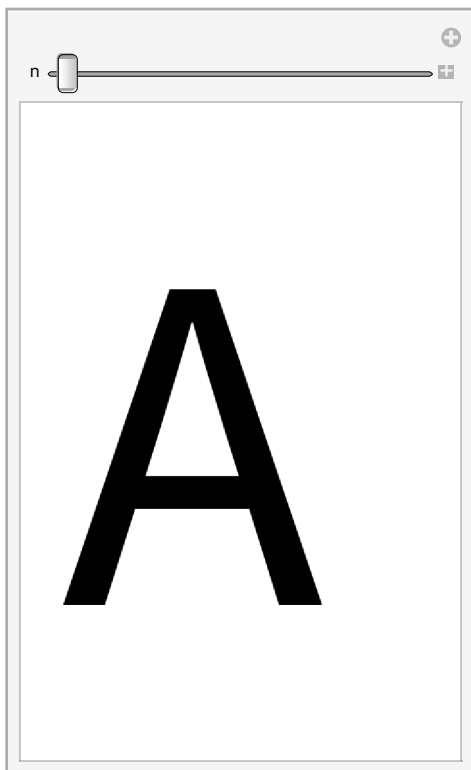
Out[124]=



In[125]:=

```
Manipulate[Blur[Rasterize[Style["A", 200]], n], {n, 0, 50}]
```

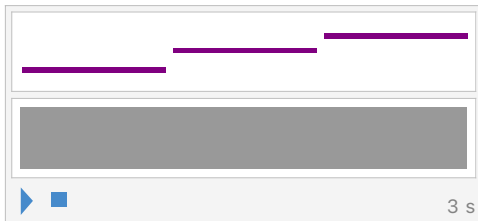
Out[125]=



In[126]:=

**Sound[{SoundNote[0], SoundNote[4], SoundNote[7]}]**

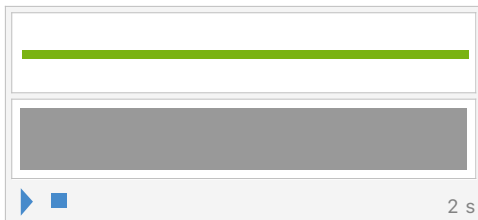
Out[126]=



In[127]:=

**Sound[SoundNote["A", 2, "Cello"]]**

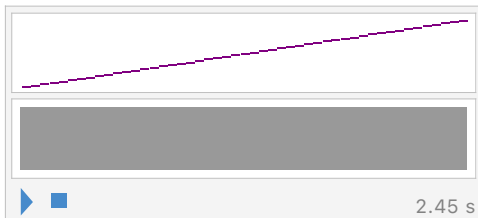
Out[127]=



In[128]:=

**Sound[Table[SoundNote[p, 0.05], {p, 0, 48, 1}]]**

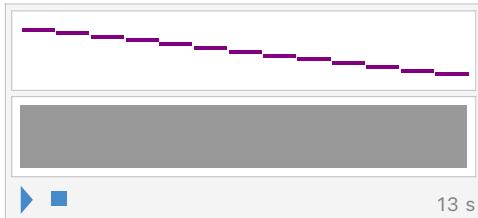
Out[128]=



In[129]:=

**Sound[Table[SoundNote[p], {p, 12, 0, -1}]]**

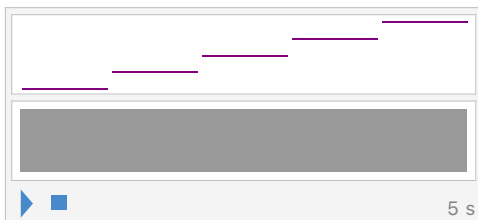
Out[129]=



In[130]:=

**Sound[Table[SoundNote[p], {p, 0, 48, 12}]]**

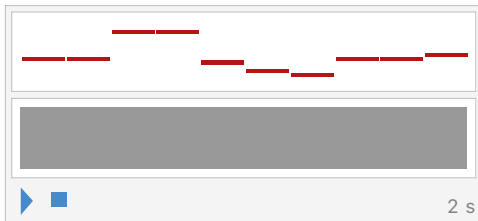
Out[130]=



In[131]:=

```
Sound[Table[SoundNote[RandomInteger[12], 0.2, "Trumpet"], 10]]
```

Out[131]=



In[132]:=

```
Sound[Table[SoundNote[RandomInteger[12], RandomInteger[10] / 10], 10]]
```

Out[132]=



In[133]:=

```
Sound[Table[SoundNote[Part[IntegerDigits[2^31], n], 0.1],  
  {n, 1, Length[IntegerDigits[2^31]]}]]
```

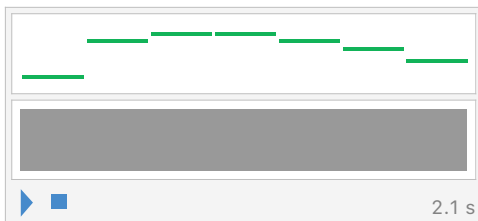
Out[133]=



In[134]:=

```
Sound[Table[SoundNote[Part[Characters["CABBAGE"], n], 0.3, "Guitar"],  
  {n, 1, StringLength["CABBAGE"]}]]
```

Out[134]=



In[135]:=

```
Sound[Table[SoundNote[LetterNumber[Part[Characters["wolfram"], n]], 0.1],
  {n, 1, StringLength["wolfram"]}]]
```

Out[135]=



In[136]:=

```
Grid[Table[i*j, {i, 12}, {j, 12}]]
```

Out[136]=

1	2	3	4	5	6	7	8	9	10	11	12
2	4	6	8	10	12	14	16	18	20	22	24
3	6	9	12	15	18	21	24	27	30	33	36
4	8	12	16	20	24	28	32	36	40	44	48
5	10	15	20	25	30	35	40	45	50	55	60
6	12	18	24	30	36	42	48	54	60	66	72
7	14	21	28	35	42	49	56	63	70	77	84
8	16	24	32	40	48	56	64	72	80	88	96
9	18	27	36	45	54	63	72	81	90	99	108
10	20	30	40	50	60	70	80	90	100	110	120
11	22	33	44	55	66	77	88	99	110	121	132
12	24	36	48	60	72	84	96	108	120	132	144

In[137]:=

```
Grid[Table[RomanNumeral[i*j], {i, 5}, {j, 5}]]
```

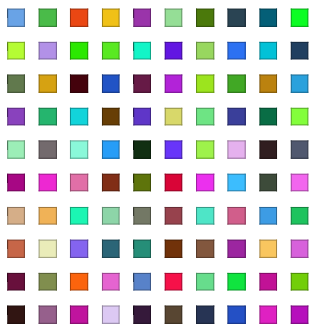
Out[137]=

I	II	III	IV	V
II	IV	VI	VIII	X
III	VI	IX	XII	XV
IV	VIII	XII	XVI	XX
V	X	XV	XX	XXV

In[138]:=

```
Grid[Table[RandomColor[], 10, 10]]
```

Out[138]=





In[139]:=

```
Grid[Table[Style[RandomInteger[10], RandomColor[]], 10, 10]]
```

Out[139]=

```

 2  3  2  6  7  4  5  0  4  7
 8  6  9  9  6 10  7  8  0  9
10  8  5  9  4  5  0 10  8  6
 8  1  5  7  6  9  2  3  6 10
10  3  2  1  1  2  6  7  7  4
 6  7  0  6  8  7 10  3  1  5
 1 10  6  6  0  0  6  1  5  7
 9  0  9  5  7  9  9  1  7  1
 8  4  0  4 10  2  7 10  0  8
 7  1  8  5  2  5  9  3 10  9

```

In[140]:=

```
Grid[Table[StringJoin[FromLetterNumber[i], FromLetterNumber[j]], {i, 26}, {j, 26}]]
```

Out[140]=

```

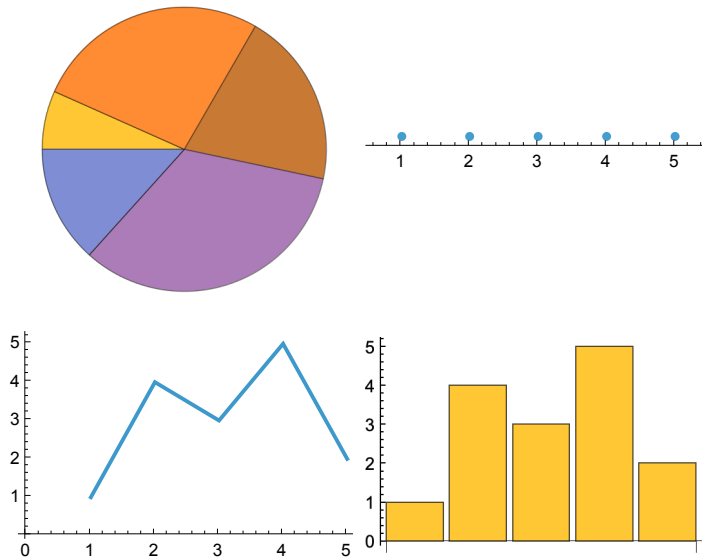
aa ab ac ad ae af ag ah ai aj ak al am an ao ap aq ar as at au av aw ax ay az
ba bb bc bd be bf bg bh bi bj bk bl bm bn bo bp bq br bs bt bu bv bw bx by bz
ca cb cc cd ce cf cg ch ci cj ck cl cm cn co cp cq cr cs ct cu cv cw cx cy cz
da db dc dd de df dg dh di dj dk dl dm dn do dp dq dr ds dt du dv dw dx dy dz
ea eb ec ed ee ef eg eh ei ej ek el em en eo ep eq er es et eu ev ew ex ey ez
fa fb fc fd fe ff fg fh fi fj fk fl fm fn fo fp fq fr fs ft fu fv fw fx fy fz
ga gb gc gd ge gf gg gh gi gj gk gl gm gn go gp gq gr gs gt gu gv gw gx gy gz
ha hb hc hd he hf hg hh hi hj hk hl hm hn ho hp hq hr hs ht hu hv hw hx hy hz
ia ib ic id ie if ig ih ii ij ik il im in io ip iq ir is it iu iv iw ix iy iz
ja jb jc jd je jf jg jh ji jj jk jl jm jn jo jp jq jr js jt ju jv jw jx jy jz
ka kb kc kd ke kf kg kh ki kj kk kl km kn ko kp kq kr ks kt ku kv kw kx ky kz
la lb lc ld le lf lg lh li lj lk ll lm ln lo lp lq lr ls lt lu lv lw lx ly lz
ma mb mc md me mf mg mh mi mj mk ml mm mn mo mp mq mr ms mt mu mv mw mx my mz
na nb nc nd ne nf ng nh ni nj nk nl nm nn no np nq nr ns nt nu nv nw nx ny nz
oa ob oc od oe of og oh oi oj ok ol om on oo op oq or os ot ou ov ow ox oy oz
pa pb pc pd pe pf pg ph pi pj pk pl pm pn po pp pq pr ps pt pu pv pw px py pz
qa qb qc qd qe qf qg qh qi qj qk ql qm qn qo qp qq qr qs qt qu qv qw qx qy qz
ra rb rc rd re rf rg rh ri rj rk rl rm rn ro rp rq rr rs rt ru rv rw rx ry rz
sa sb sc sd se sf sg sh si sj sk sl sm sn so sp sq sr ss st su sv sw sx sy sz
ta tb tc td te tf tg th ti tj tk tl tm tn to tp tq tr ts tt tu tv tw tx ty tz
ua ub uc ud ue uf ug uh ui uj uk ul um un uo up uq ur us ut uu uv uw ux uy uz
va vb vc vd ve vf vg vh vi vj vk vl vm vn vo vp vq vr vs vt vu vv vw vx vy vz
wa wb wc wd we wf wg wh wi wj wk wl wm wn wo wp wq wr ws wt wu ww wx wy wz
xa xb xc xd xe xf xg xh xi xj xk xl xm xn xo xp xq xr xs xt xu xv xw xx xy xz
ya yb yc yd ye yf yg yh yi yj yk yl ym yn yo yp yq yr ys yt yu yv yw yx yy yz
za zb zc zd ze zf zg zh zi zj zk zl zm zn zo zp zq zr zs zt zu zv zw zx zy zz

```

In[141]:=

```
Grid[{{PieChart[{1, 4, 3, 5, 2}], NumberLinePlot[{1, 4, 3, 5, 2}]},
      {ListLinePlot[{1, 4, 3, 5, 2}], BarChart[{1, 4, 3, 5, 2}]}}]
```

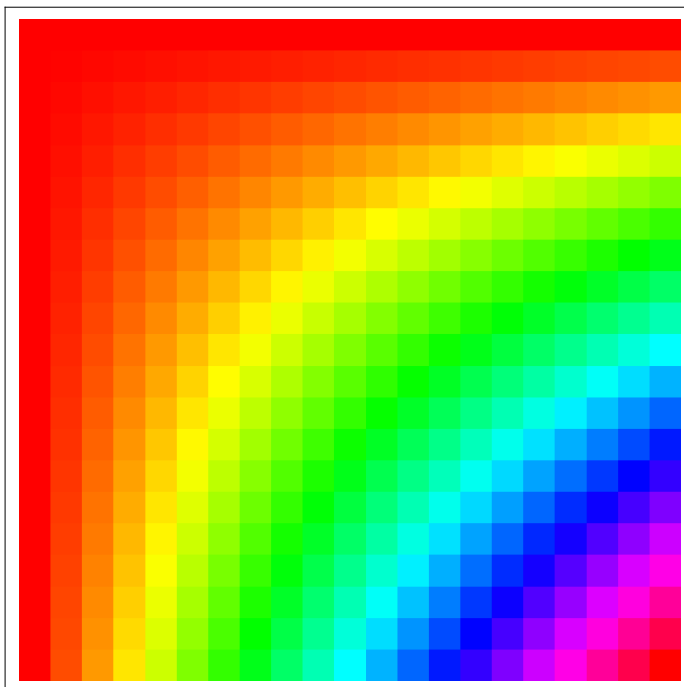
Out[141]=



In[142]:=

```
ArrayPlot[Table[Hue[i*j], {i, 0, 1, 0.05}, {j, 0, 1, 0.05}]]
```

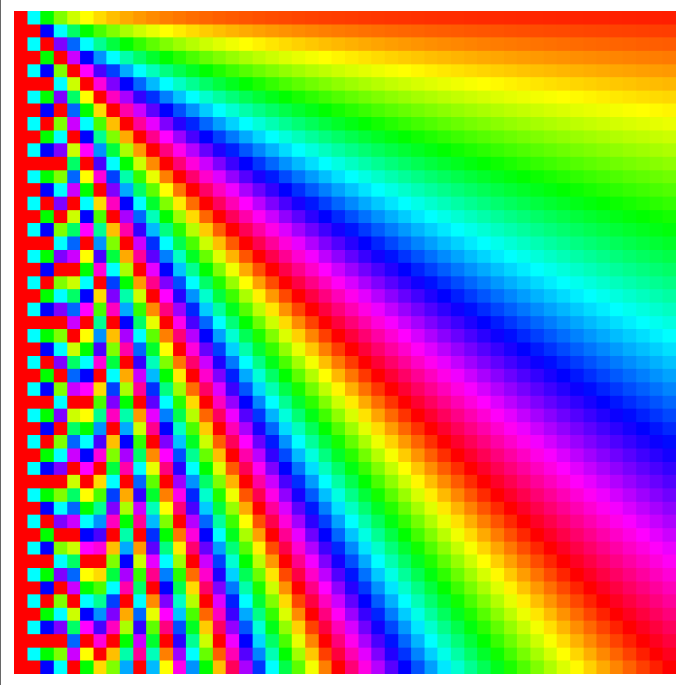
Out[142]=



In[143]:=

```
ArrayPlot[Table[Hue[x / y], {x, 1, 50, 1}, {y, 1, 50, 1}]]
```

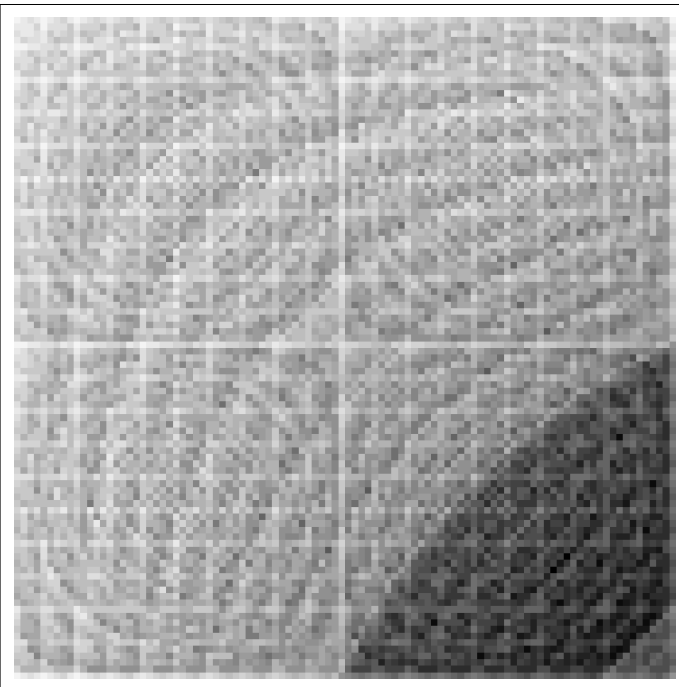
Out[143]=



In[144]:=

```
ArrayPlot[Table[StringLength[RomanNumeral[i * j]], {i, 100}, {j, 100}]]
```

Out[144]=



In[145]:=

In[146]:=

In[147]:=

In[148]:=

In[149]:=