Contour plots for selected IMBLEND modes

Keep in mind that most of these modes accept an AMOUNT parameter
Adjusting AMOUNT can vary behavior significantly
Unless specified otherwise, AMOUNT=1.
'scaleadd', 'scalemult', and 'contrast' modes also vary with image mean

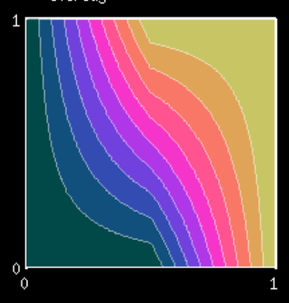
Intensity map overview
R-BG Contrast map overview
R vs BG Meridian map overview
Loci of Neutral response (conditions in which BG remains unchanged)
Soft Light comparisons

Parameter Sweeps

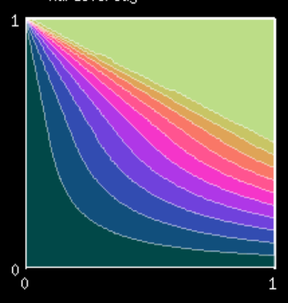
- Soft Light eb2 (meridian maps)
- Overlay
- Flat Light
- Mean Light
- Soft Mean Light
- Super Light
- Pin Light
- Hard Mix PS
- Hard Mix IB
- Hard Mix KR
- Scale Add
- Scale Mult
- Contrast
- Curves
- Color Dodge
- Color Burn
- Linear Dodge
- Linear Burn
- Soft Dodge
- Soft Burn
- Easy Dodge
- Easy Burn
- Glow
- Heat
- Gleat
- Helow
- Interpolate
- Pnorm
- Lighten RGB

INTENSITY MAPS FOR NONCOMPONENT BLEND MODES

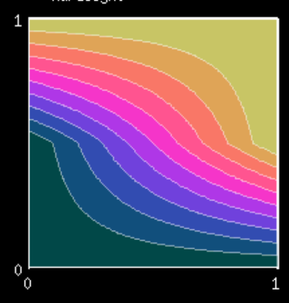
overlay



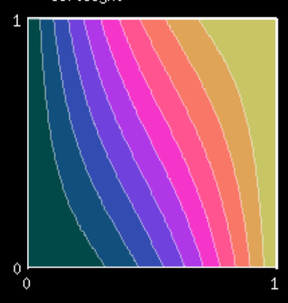
hardoverlay



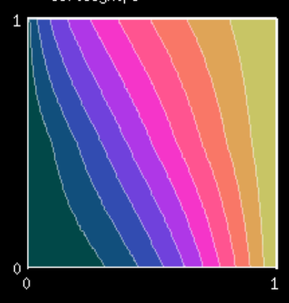
hardlight



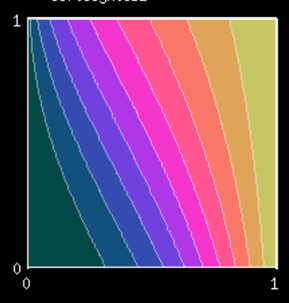
softlight



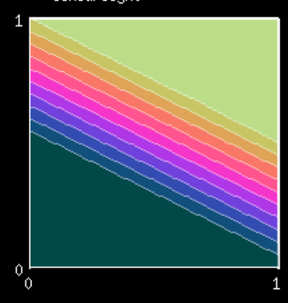
softlightps



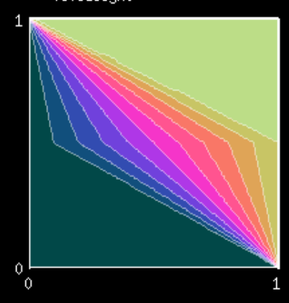
softlighteb2



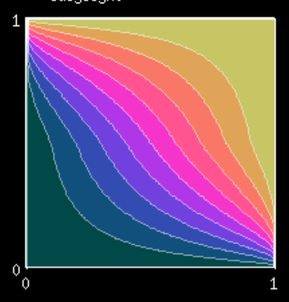
linearlight



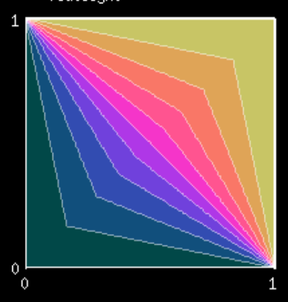
vividlight



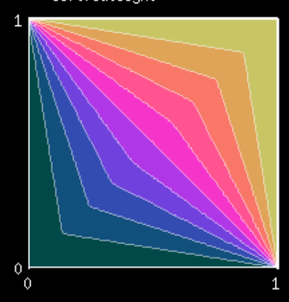
easylight



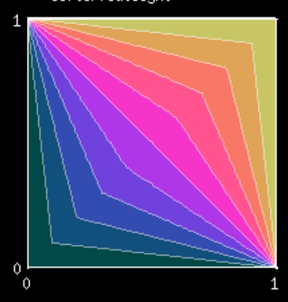
flatlight



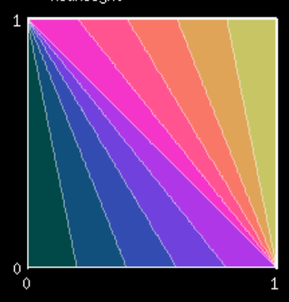
softflatlight



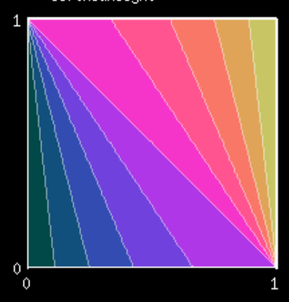
softerflatlight



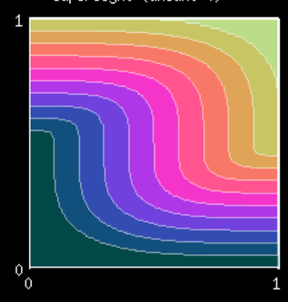
meanlight



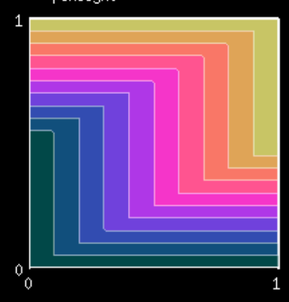
softmeanlight



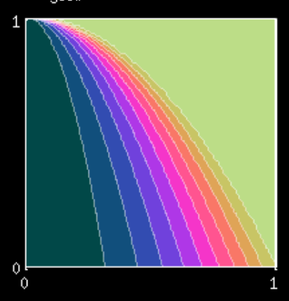
superlight (amount=4)



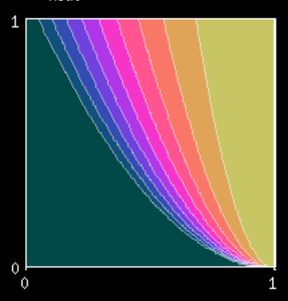
pinlight



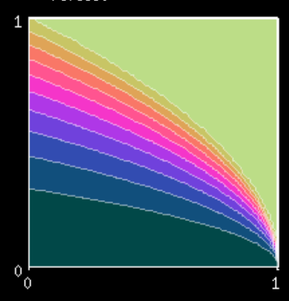
glow



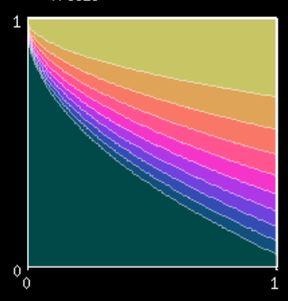
heat



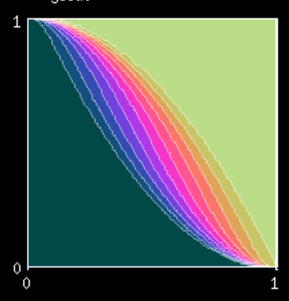
reflect



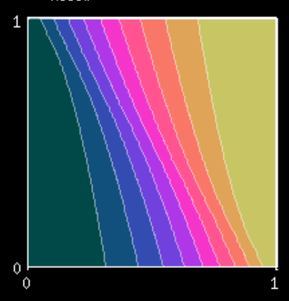
freeze



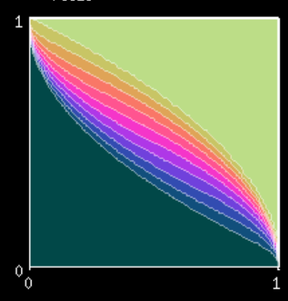
gleat



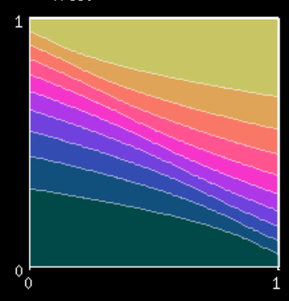
helow



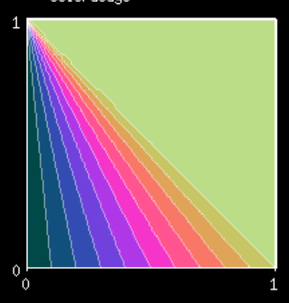
reeze



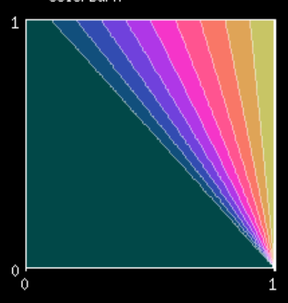
frect



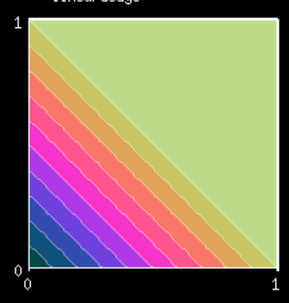
colordodge



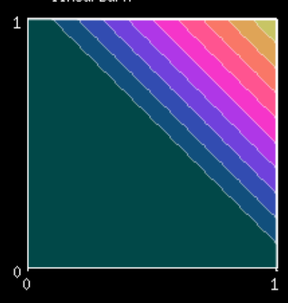
colorburn



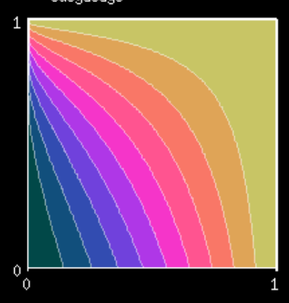
lineardodge



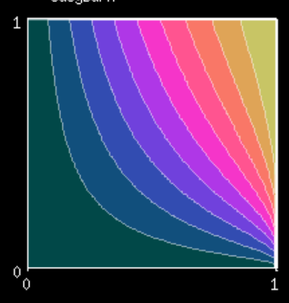
linearburn



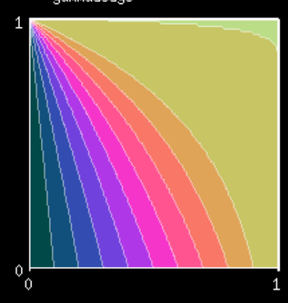
easydodge



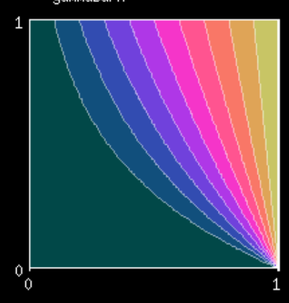
easyburn



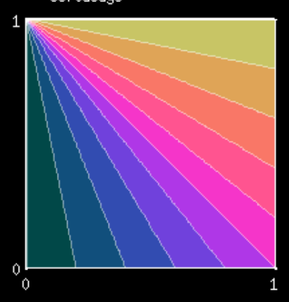
gammadodge



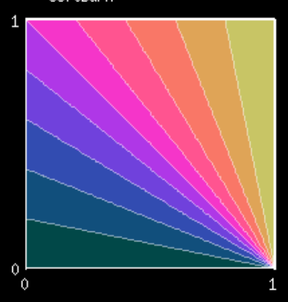
gammaburn



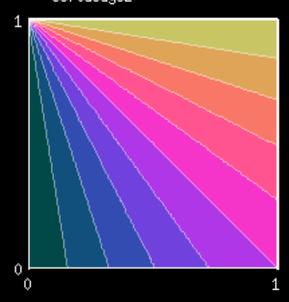
softdodge



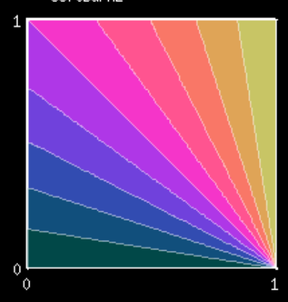
softburn



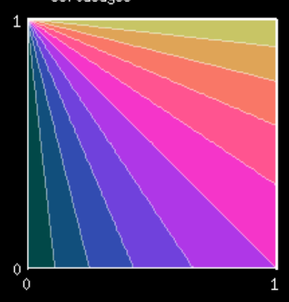
softdodge2



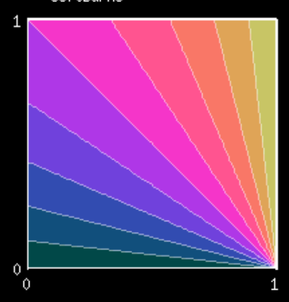
softburn2



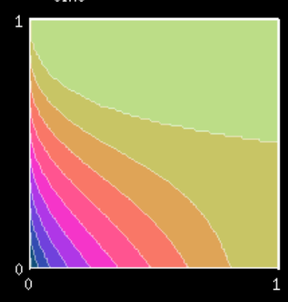
softdodge3



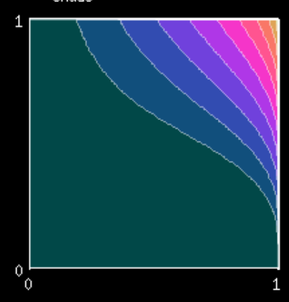
softburn3



tint



shade



light

shadow

bright

dark

lighteneb

darkeneb

lightenrgb

darkenrgb

near (amount=0.05)

far (amount=0.05)

multiply

screen

addition

subtraction

bleach

stain

difference

equivalence

negation

extremity

hardmixps

hardmixkr

interpolate

hardint (amount=2)

average

geometric

harmonic

pnorm (amount=2)

exclusion

scaleadd

scalemult

contrast

arctan

grainextract

grainmerge

sqrtdiff

compsqrtdiff

gammalight

gammadark

divide

curves (amount=[1 1])

mod

modshift

moddivide

cmod

cmodshift

cmoddivide

mesh (amount=eye(4))

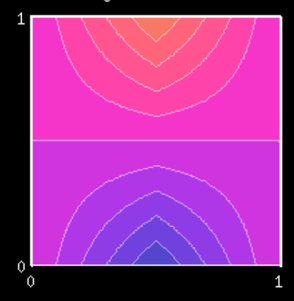
bomb (amount=2)

hardbomb (amount=2)

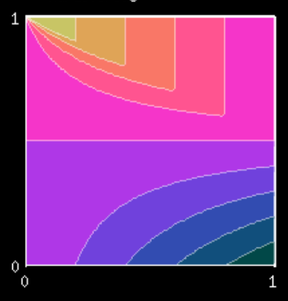
normal

CONTRAST MAPS FOR NONCOMPONENT BLEND MODES

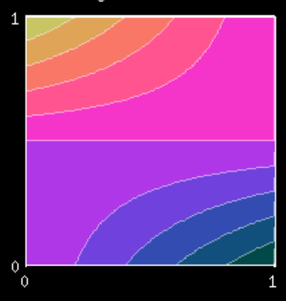
overlay



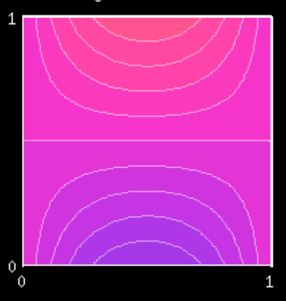
hardoverlay



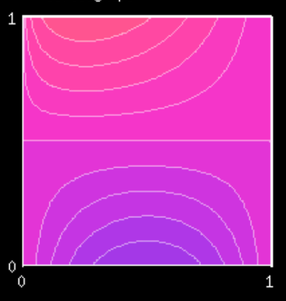
hardlight



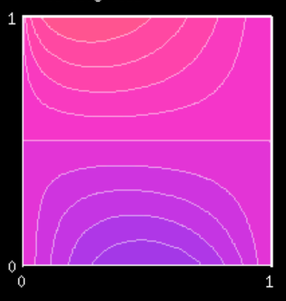
softlight



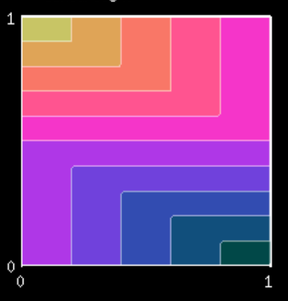
softlightps



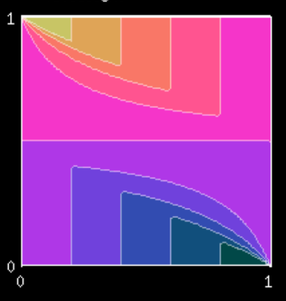
softlighteb2



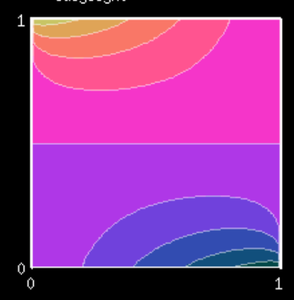
linearlight



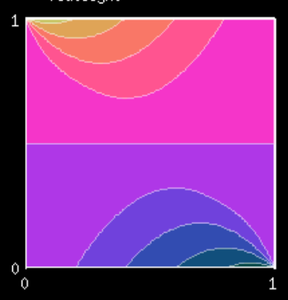
vividlight



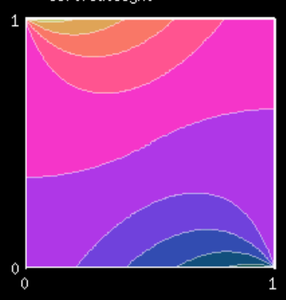
easylight



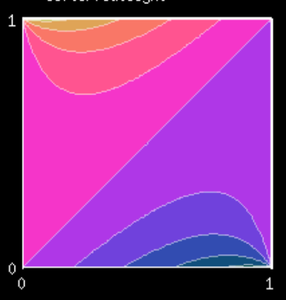
flatlight



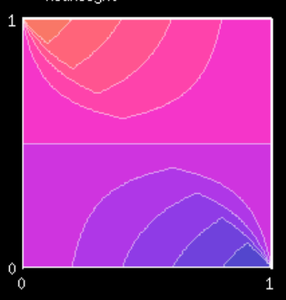
softflatlight



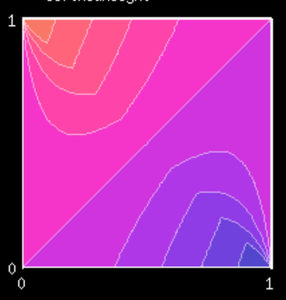
softerflatlight



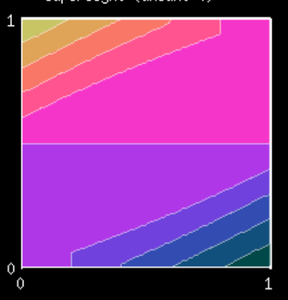
meanlight



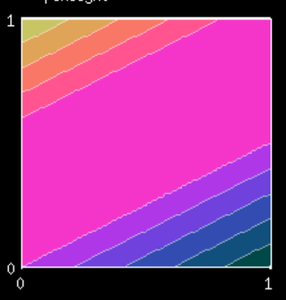
softmeanlight



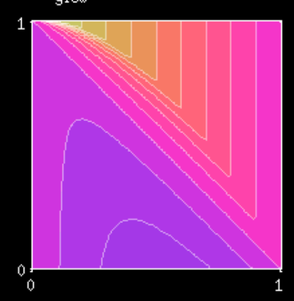
superlight (amount=4)



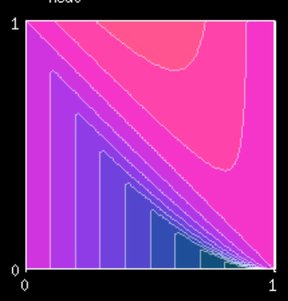
pinlight



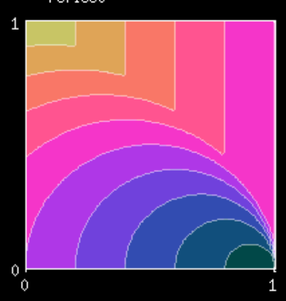
glow



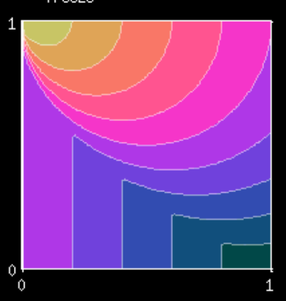
heat



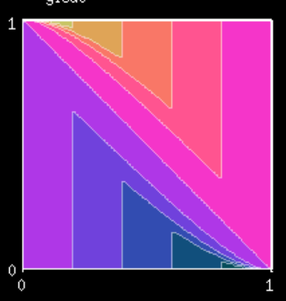
reflect



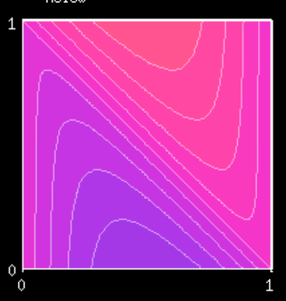
freeze



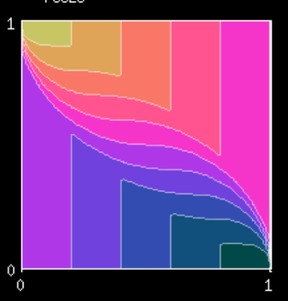
gleat



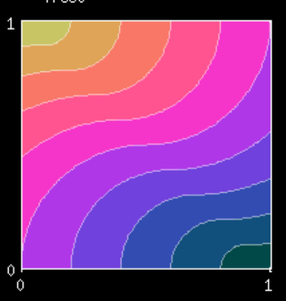
helow



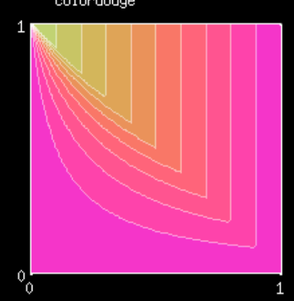
reeze



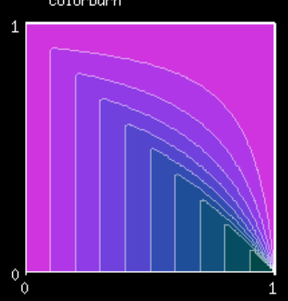
frect



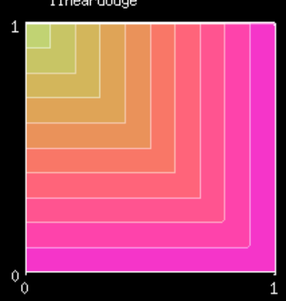
colordodge



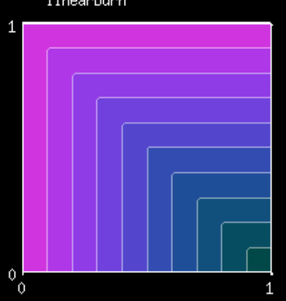
colorburn



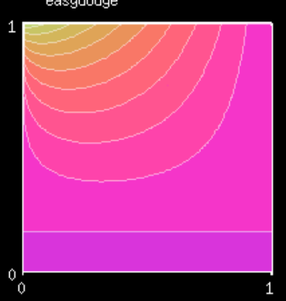
lineardodge



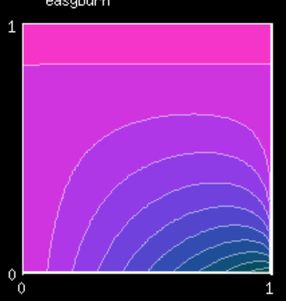
linearburn



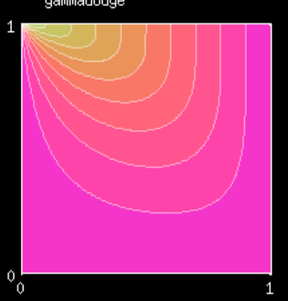
easydodge



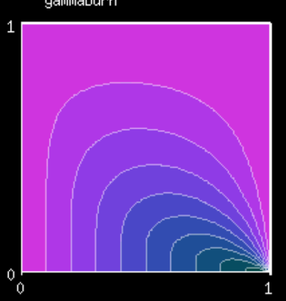
easyburn



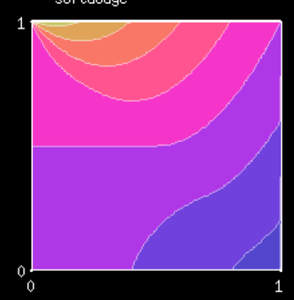
gammadodge



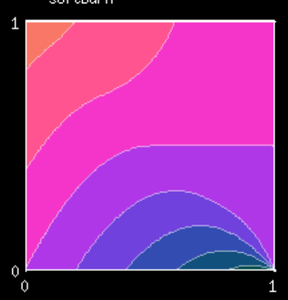
gammaburn



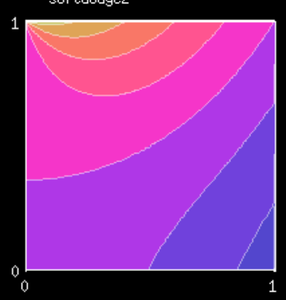
softdodge



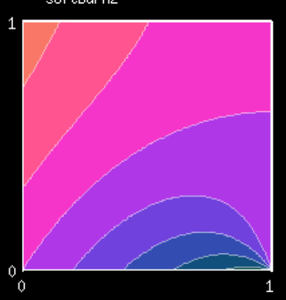
softburn



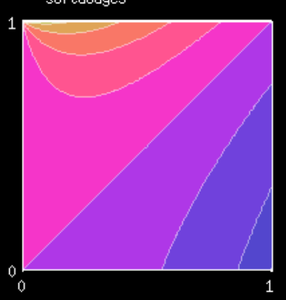
softdodge2



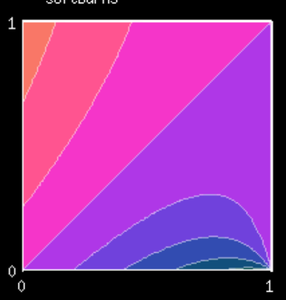
softburn2



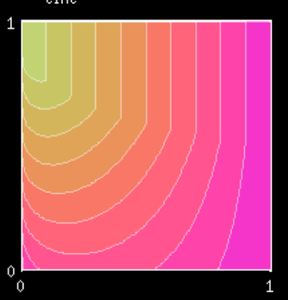
softdodge3



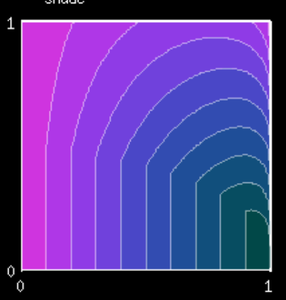
softburn3



tint



shade



light

shadow

bright

dark

lighteneb

darkeneb

lightenrgb

darkenrgb

near (amount=0.05)

far (amount=0.05)

multiply

screen

addition

subtraction

bleach

stain

difference

equivalence

negation

extremity

hardmixps

hardmixkr

interpolate

hardint (amount=2)

average

geometric

harmonic

pnorm (amount=2)

exclusion

scaleadd

scalemult

contrast

arctan

grainextract

grainmerge

sqrtdiff

compsqrtdiff

gammalight

gammadark

divide

curves (amount=[1 1])

mod

modshift

moddivide

cmod

cmodshift

cmoddivide

mesh (amount=eye(4))

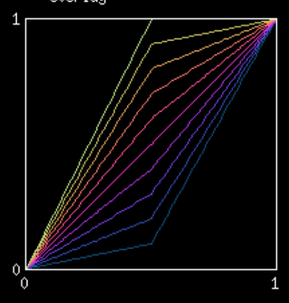
bomb (amount=2)

hardbomb (amount=2)

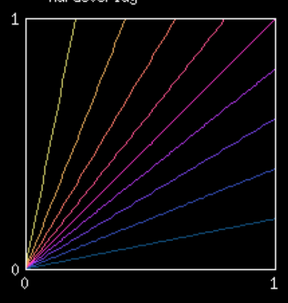
normal

MERIDIAN MAPS FOR NONCOMPONENT BLEND MODES

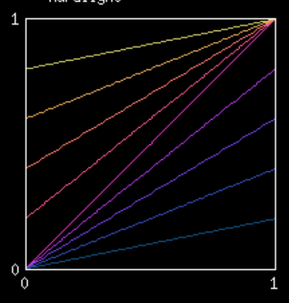
overlay



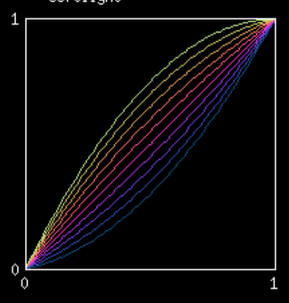
hardoverlay



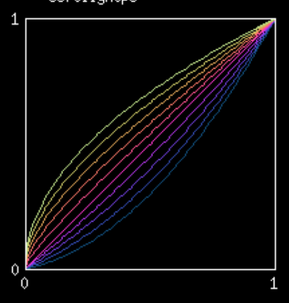
hardlight



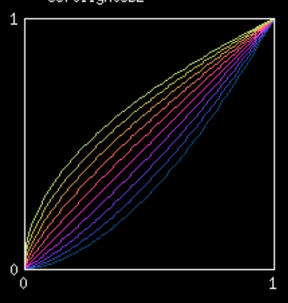
softlight



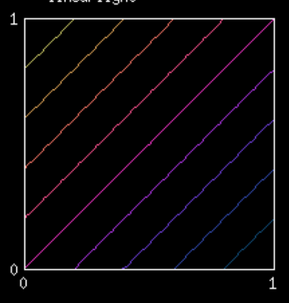
softlightps



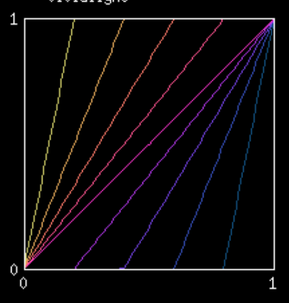
softlighteb2



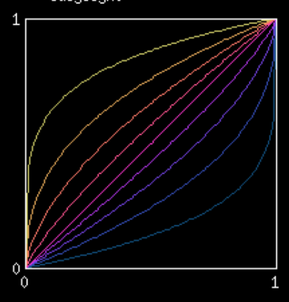
linearlight



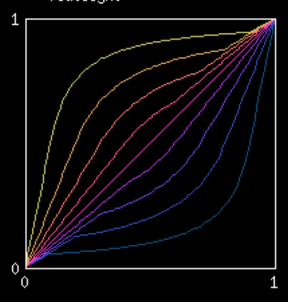
vividlight



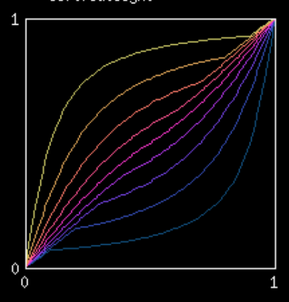
easylight



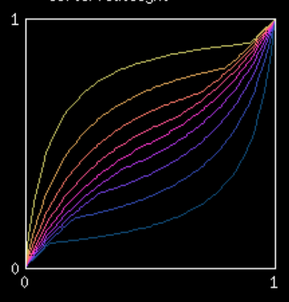
flatlight



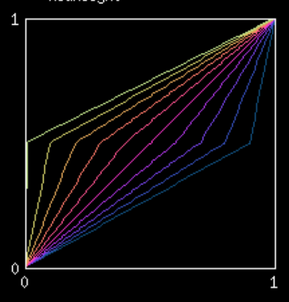
softflatlight



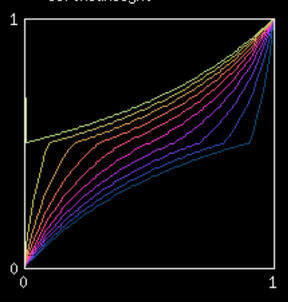
softerflatlight



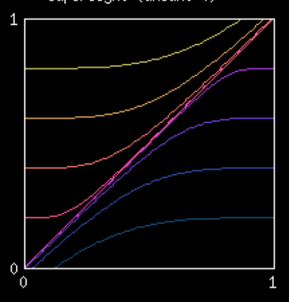
meanlight



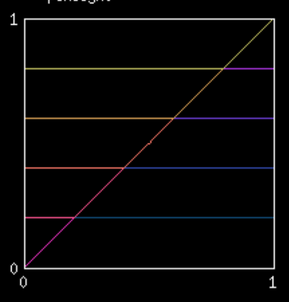
softmeanlight



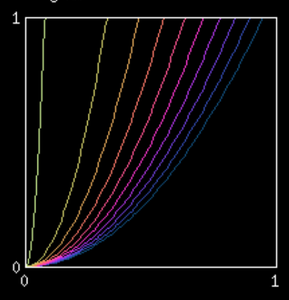
superlight (amount=4)



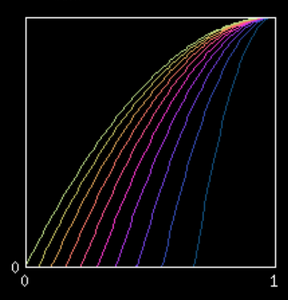
pinlight



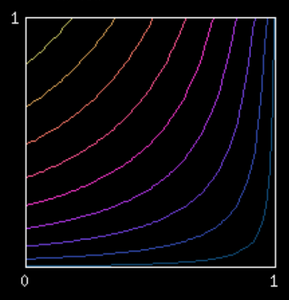
glow



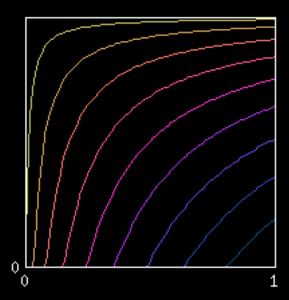
heat



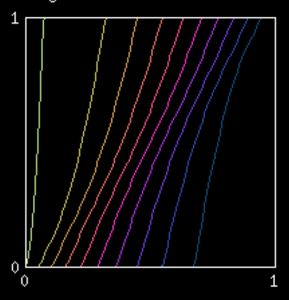
reflect



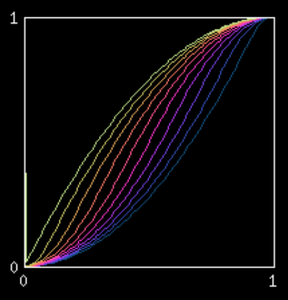
freeze



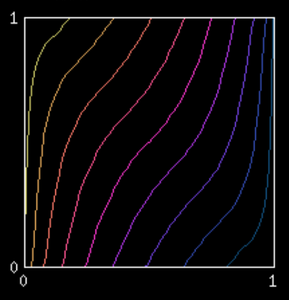
gleat



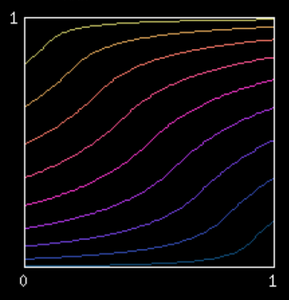
helow



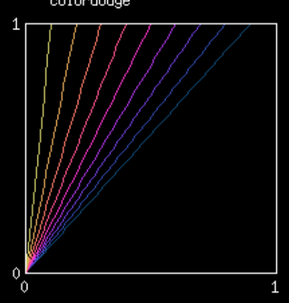
reeze



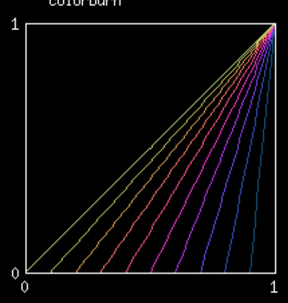
frect



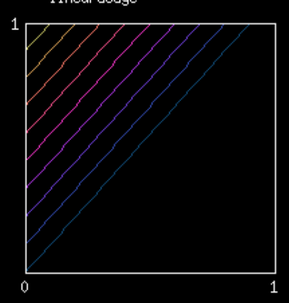
colordodge



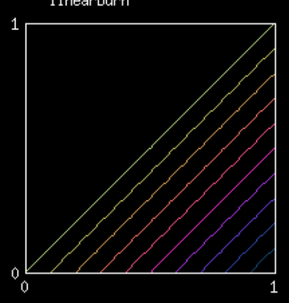
colorburn



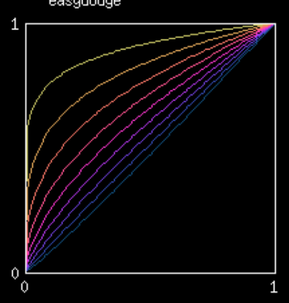
lineardodge



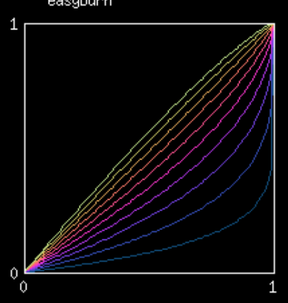
linearburn



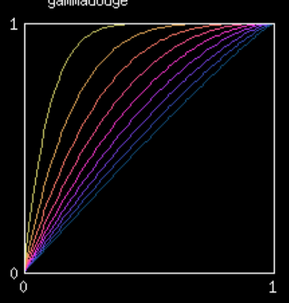
easydodge



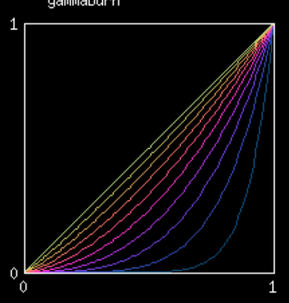
easyburn



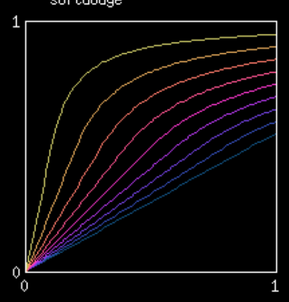
gammadodge



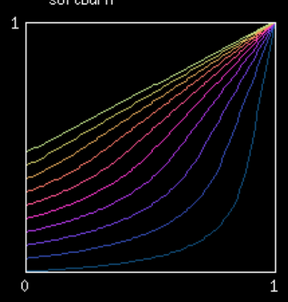
gammaburn



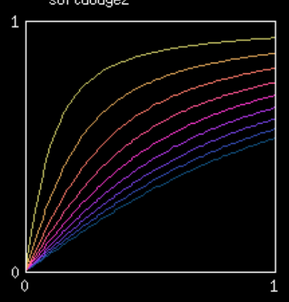
softdodge



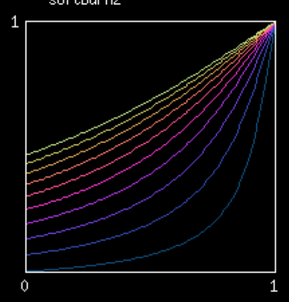
softburn



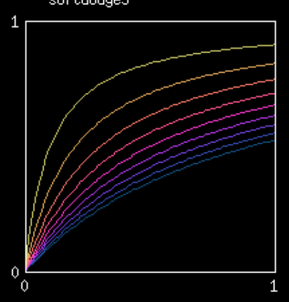
softdodge2



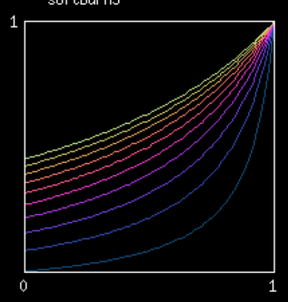
softburn2



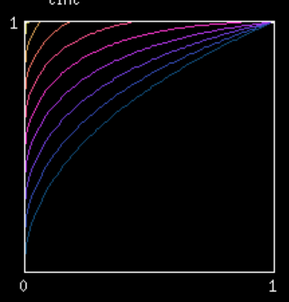
softdodge3



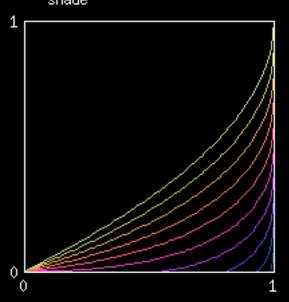
softburn3



tint



shade



light

shadow

bright

dark

lighteneb

darkeneb

subtraction

lightenrgb

bleach

darkenrgb

near (amount=0.05)

far (amount=0.05)

multiply

screen

addition

stain

difference

equivalence

negation

extremity

hardmixps

hardmixkr

interpolate

hardint (amount=2)

average

geometric

harmonic

pnorm (amount=2)

exclusion

scaleadd

scalemult

contrast

arctan

grainextract

grainmerge

sqrtdiff

compsqrtdiff

gammalight

gammadark

divide

curves (amount=[1 1])

mod

modshift

moddivide

cmod

cmodshift

cmoddivide

mesh (amount=eye(4))

bomb (amount=2)

result

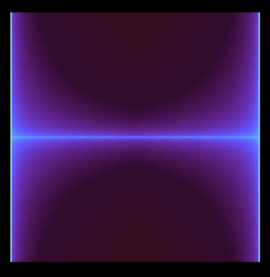
background

hardbomb (amount=2)

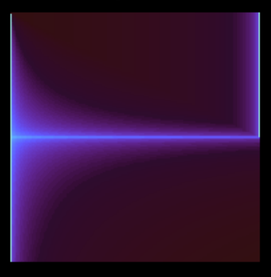
normal

LOCI OF NEUTRAL RESPONSE (see contrast plots)

overlay

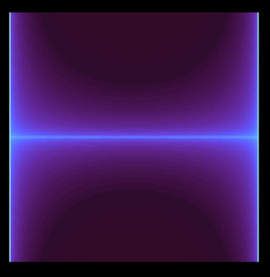


hardoverlay

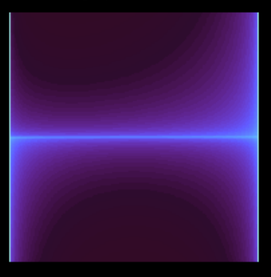


hardlight

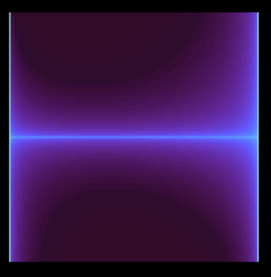
softlight



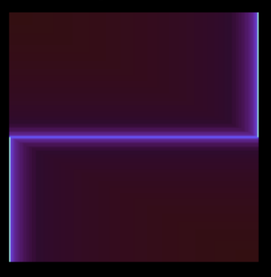
softlightps



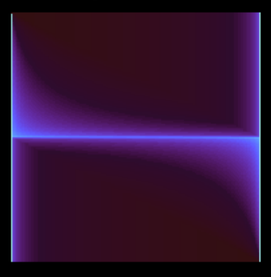
softlighteb2



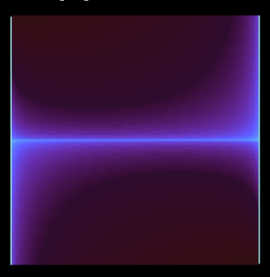
linearlight



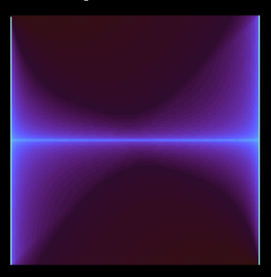
vividlight



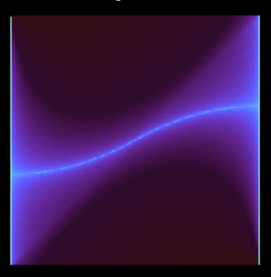
easylight



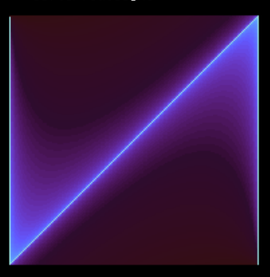
flatlight



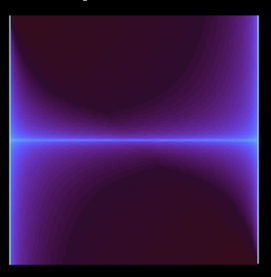
softflatlight



softerflatlight

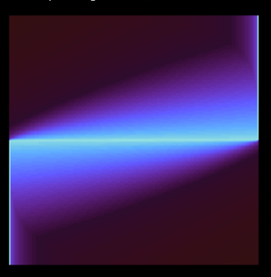


meanlight

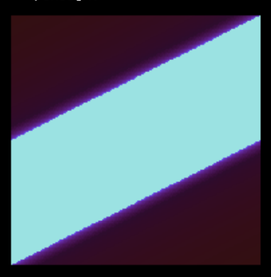


softmeanlight

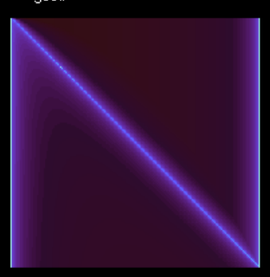
superlight (amount=4)



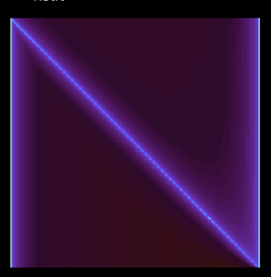
pinlight



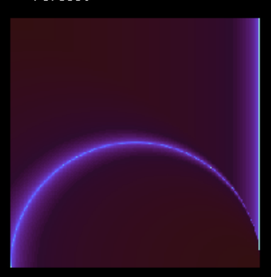
glow



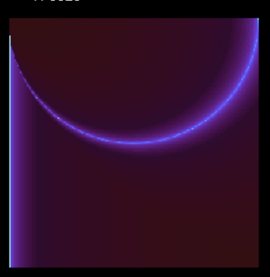
heat



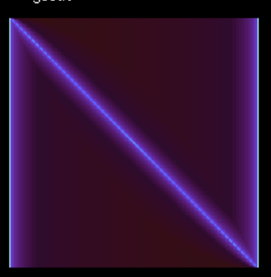
reflect



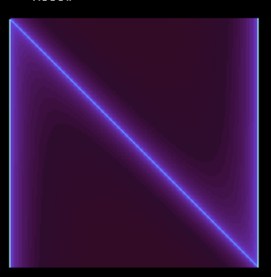
freeze



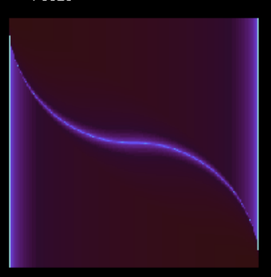
gleat



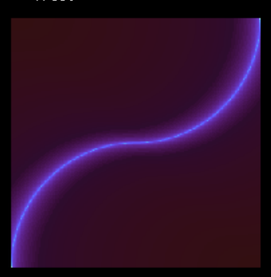
helow



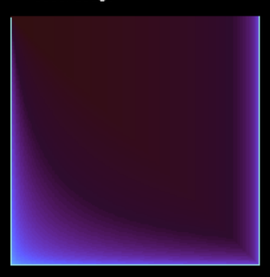
reeze



frect



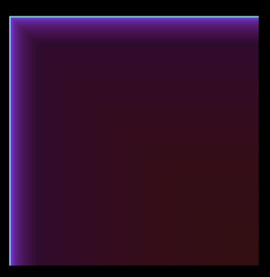
colordodge



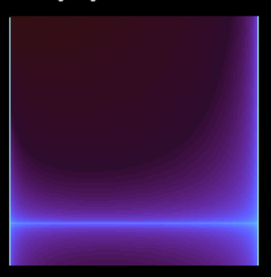
colorburn

lineardodge

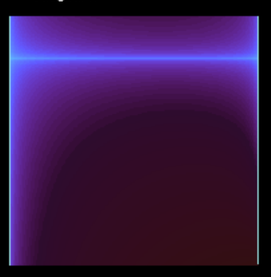
linearburn



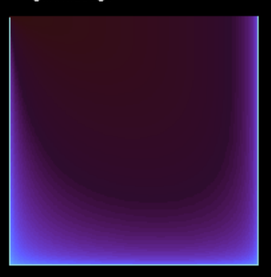
easydodge



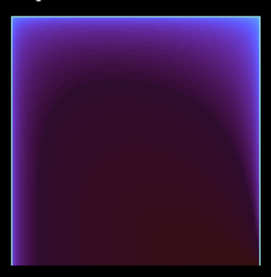
easyburn



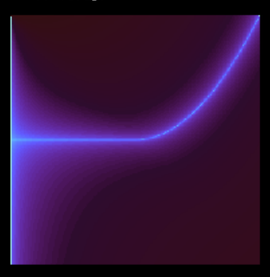
gammadodge



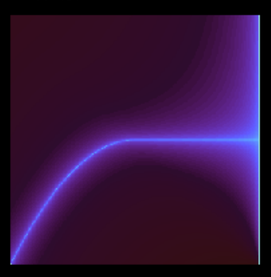
gammaburn



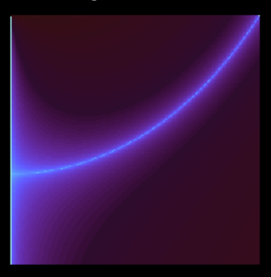
softdodge



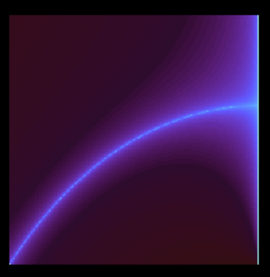
softburn



softdodge2



softburn2



softdodge3

softburn3

tint

shade

light

shadow

bright

dark

lighteneb

darkeneb

lightenrgb

darkenrgb

near (amount=0.05)

far (amount=0.05)

multiply

screen

addition

subtraction

bleach

stain

difference

equivalence

negation

extremity

hardmixps

hardmixkr

interpolate

hardint (amount=2)

average

geometric

harmonic

pnorm (amount=2)

exclusion

scaleadd

scalemult

contrast

arctan

grainextract

grainmerge

sqrtdiff

compsqrtdiff

gammalight

gammadark

divide

curves (amount=[1 1])

mod

modshift

moddivide

cmod

cmodshift

cmoddivide

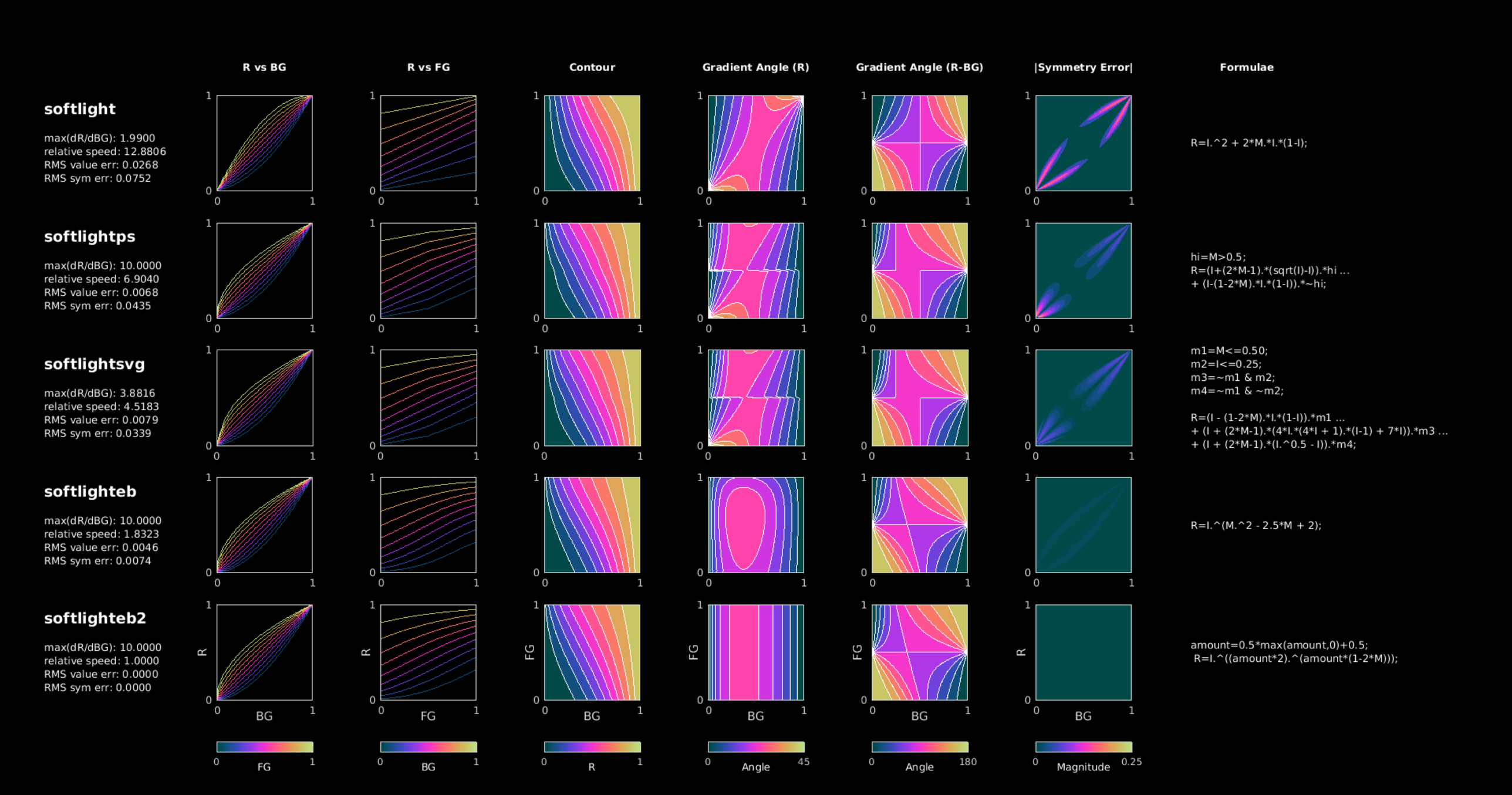
normal

foreground

background

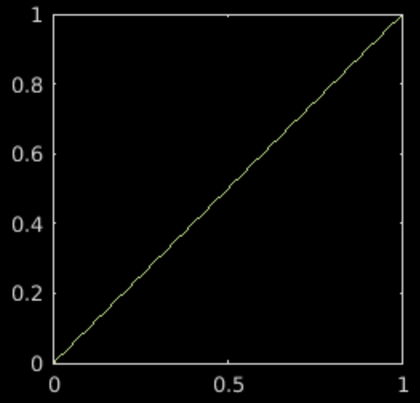
0 0.2 0.4 0.6 0.8 1

Z = Result - Background

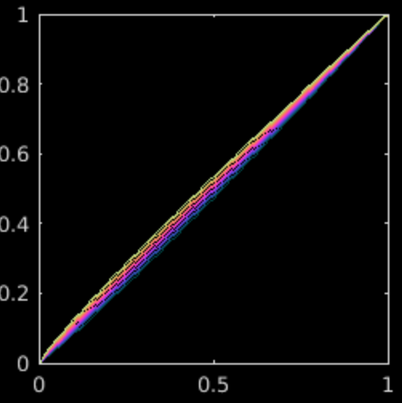

R vs BG
R vs FG
Contour
Gradient Angle (R)
Gradient Angle (R-BG)
|Symmetry Error|
Formulae
softlight
max(dR/dBG): 1.9900
relative speed: 12.8806
RMS value err: 0.0268
RMS sym err: 0.0752
R=I.^2 + 2*M.*I.*(1-I);
softlightps
max(dR/dBG): 10.0000
relative speed: 6.9040
RMS value err: 0.0068
RMS sym err: 0.0435
hi=M>0.5;
R=(I+(2*M-1).*(sqrt(I)-I)).*hi ...
+ (I-(1-2*M).*I.*(1-I)).*~hi;
softlightsvg
max(dR/dBG): 3.8816
relative speed: 4.5183
RMS value err: 0.0079
RMS sym err: 0.0339
m1=M<=0.50;
m2=I<=0.25;
m3=~m1 & m2;
m4=~m1 & ~m2;
R=(I - (1-2*M).*I.*(1-I)).*m1 ...
+ (I + (2*M-1).*(4*I.*(4*I + 1).*(I-1) + 7*I)).*m3 ...
+ (I + (2*M-1).*(I.^0.5 - I)).*m4;
softlighteb
max(dR/dBG): 10.0000
relative speed: 1.8323
RMS value err: 0.0046
RMS sym err: 0.0074
R=I.^(M.^2 - 2.5*M + 2);
softlighteb2
max(dR/dBG): 10.0000
relative speed: 1.0000
RMS value err: 0.0000
RMS sym err: 0.0000
amount=0.5*max(amount,0)+0.5;
R=I.^((amount*2).^(amount*(1-2*M)));
R
BG
FG
Angle
Magnitude
0
1
45
180
0.25

softlighteb2

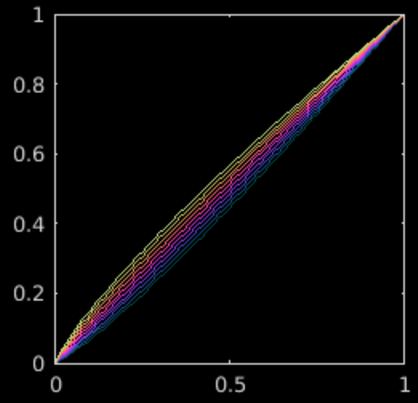
0



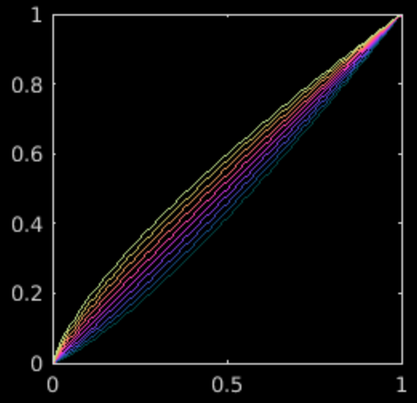
0.14286



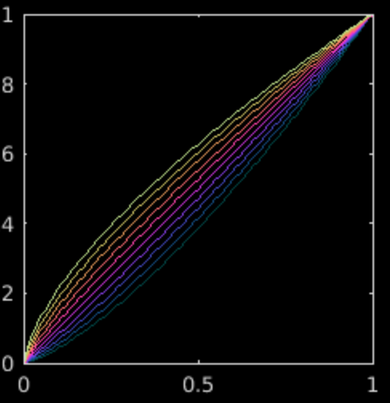
0.28571



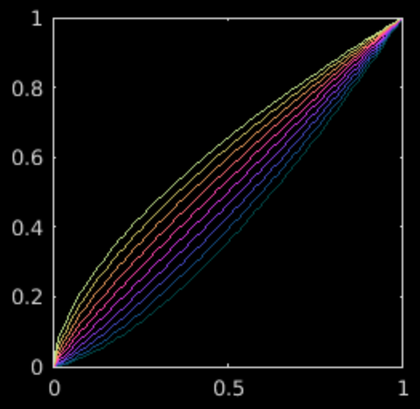
0.42857



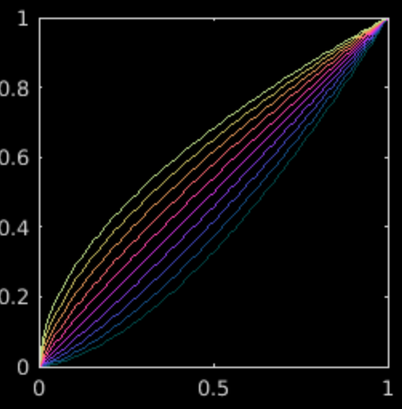
0.57143



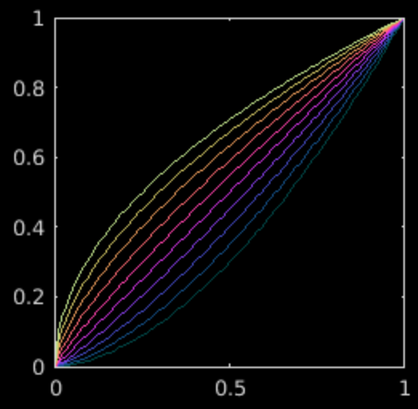
0.71429



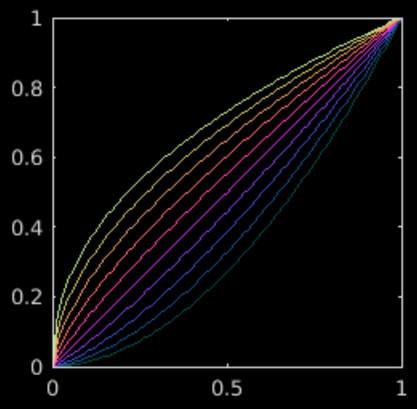
0.85714



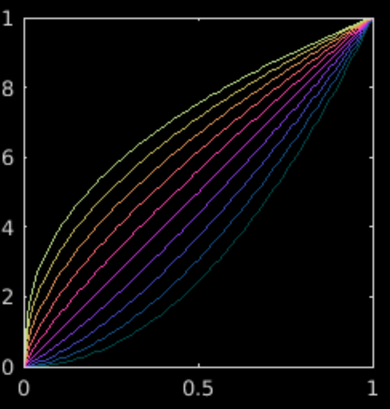
1



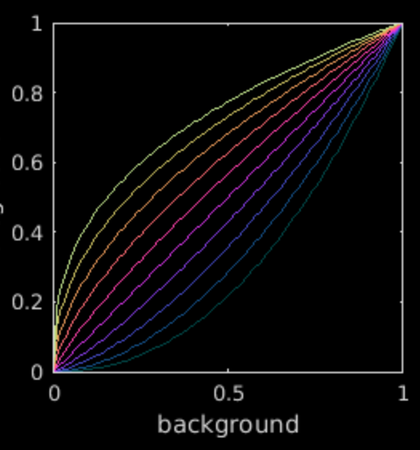
1.1429



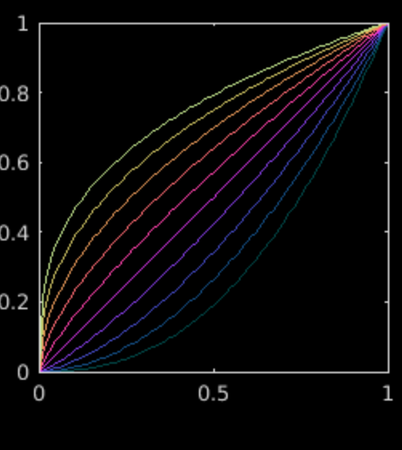
1.2857



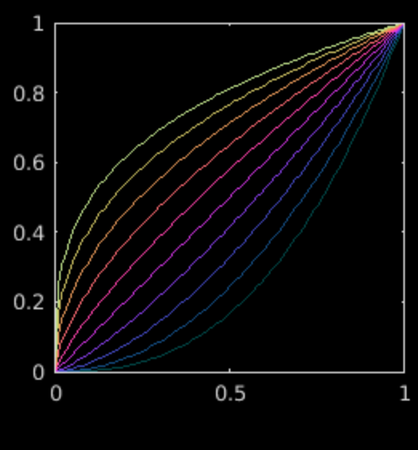
1.4286



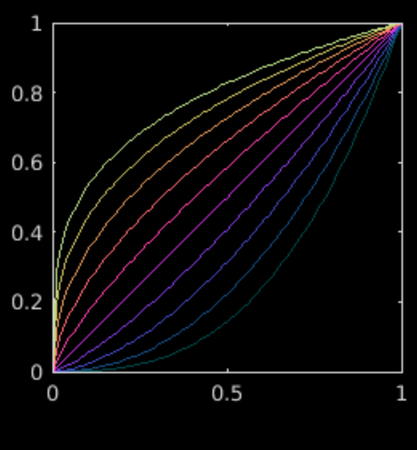
1.5714



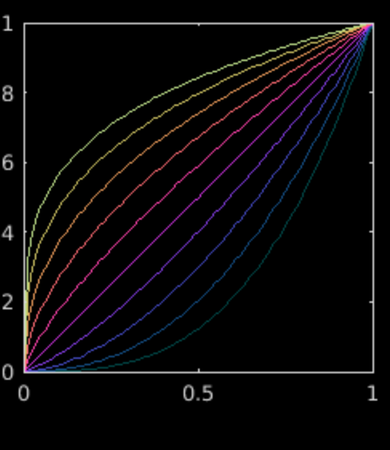
1.7143



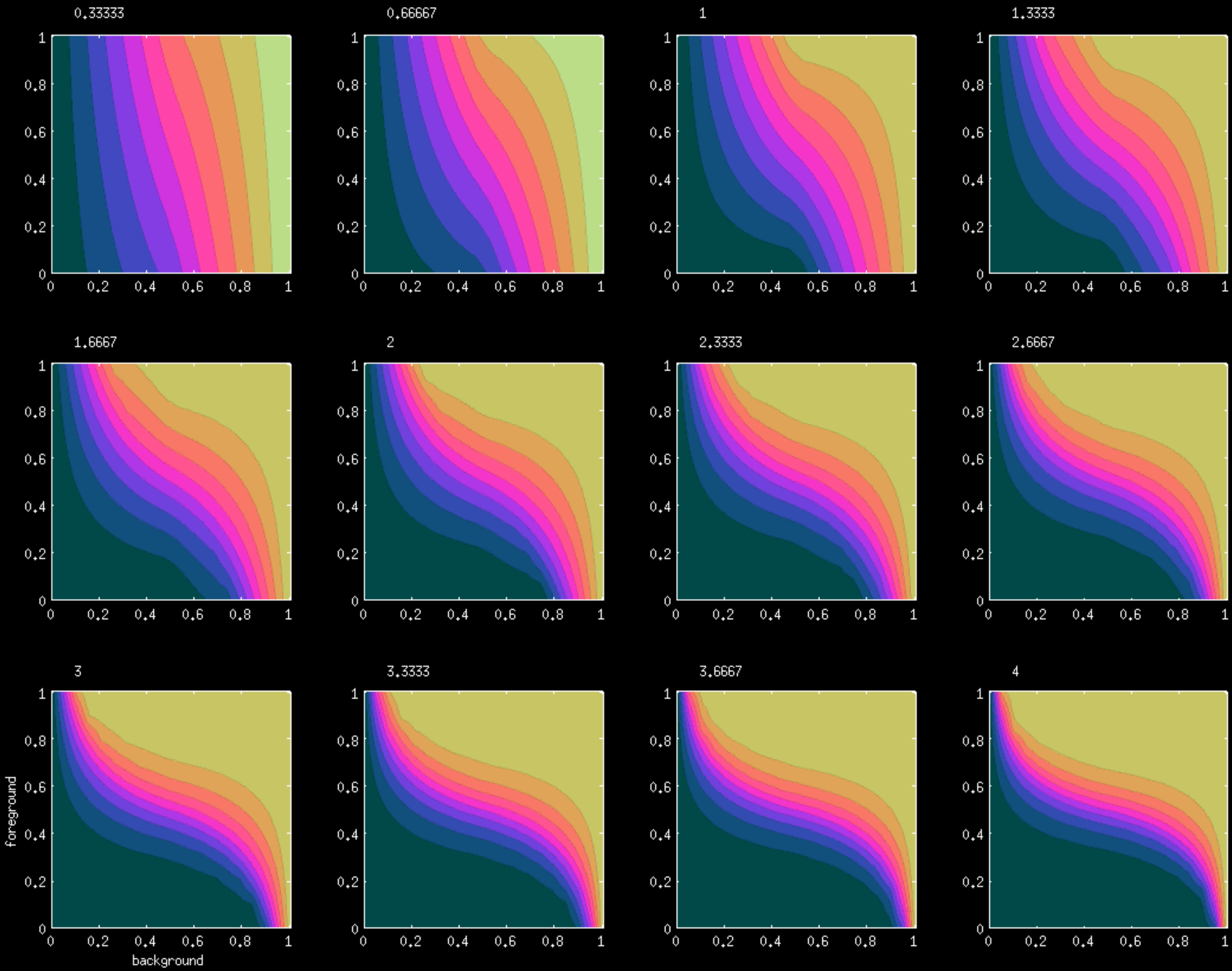
1.8571



2

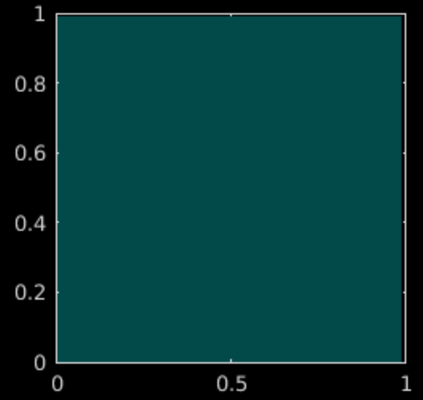


scalable overlay

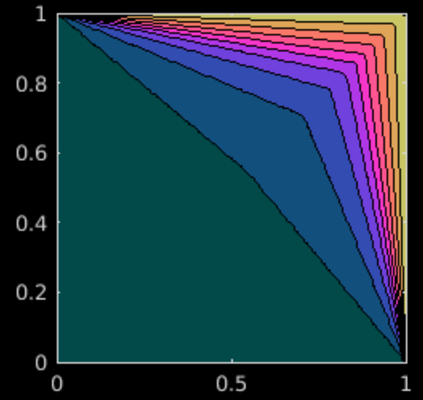


flatlight

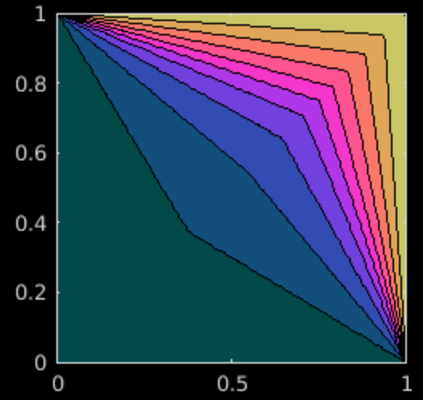
0



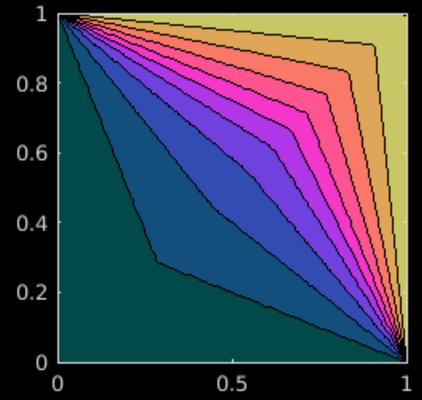
0.16667



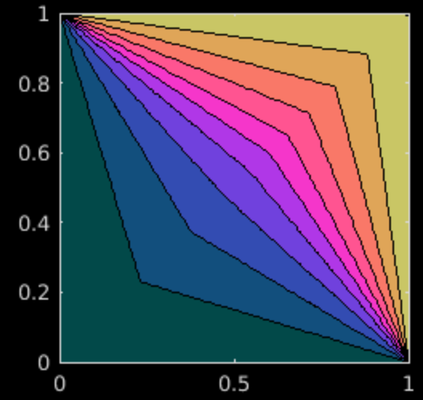
0.33333



0.5



0.66667



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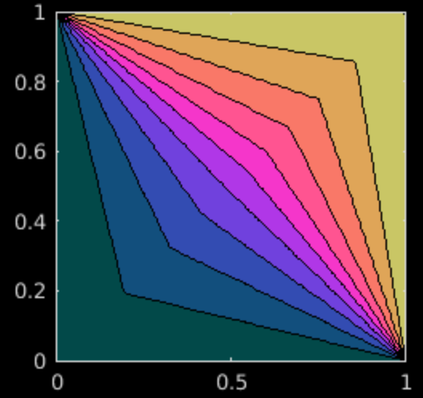
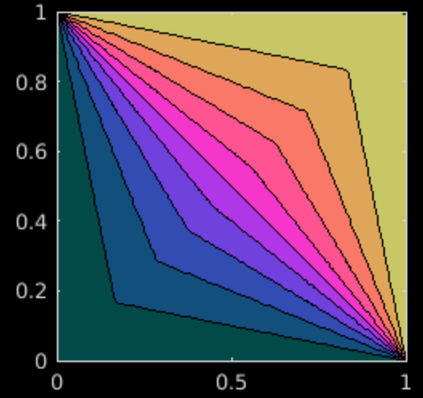
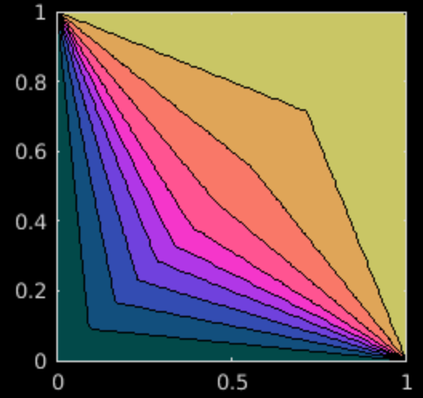


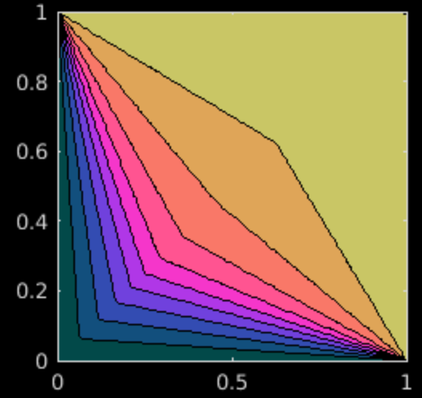
1



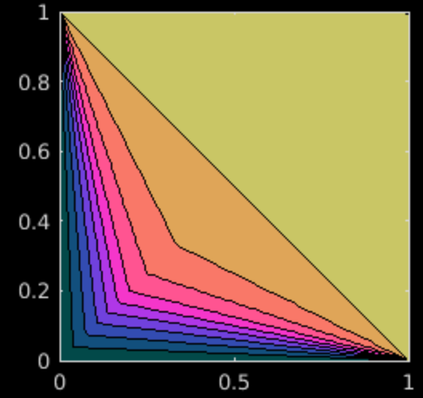
2



3



5



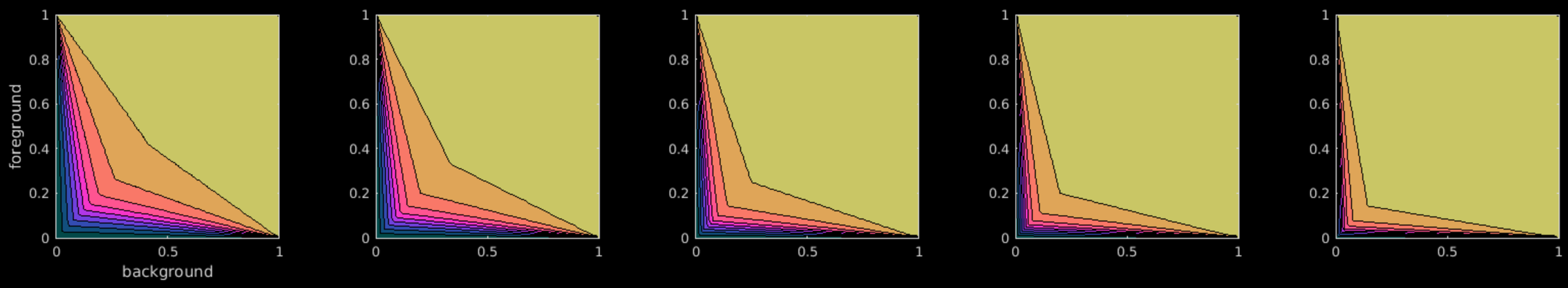
7

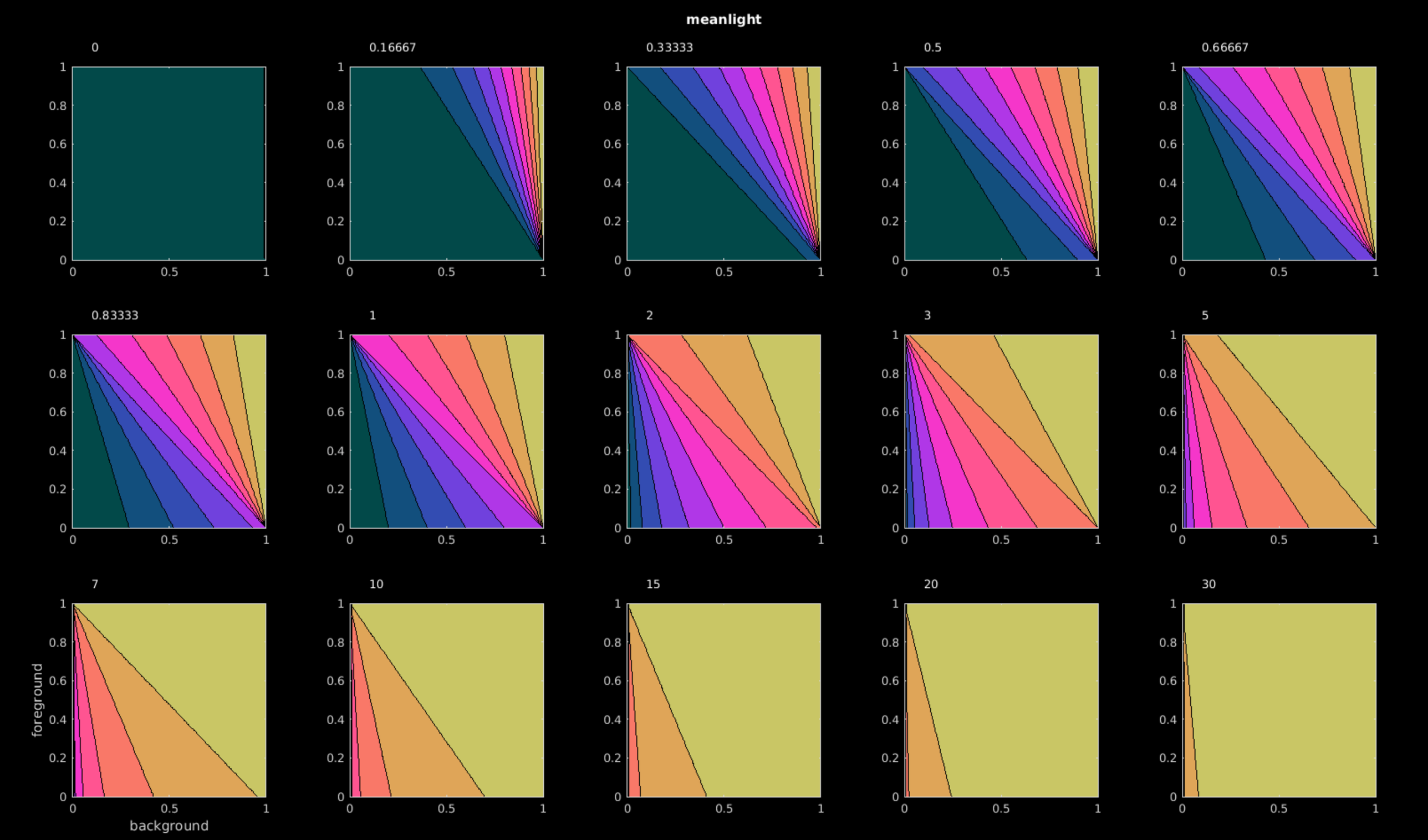
10

15

20

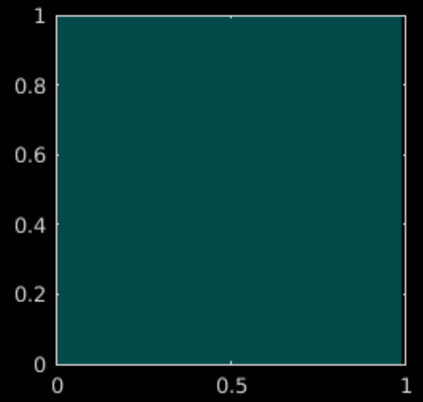
30




meanlight
0
0.16667
0.33333
0.5
0.66667
0.83333
1
2
3
5
7
10
15
20
30
foreground
background

softmeanlight

0



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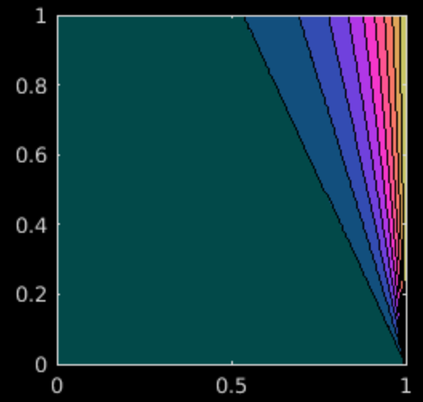
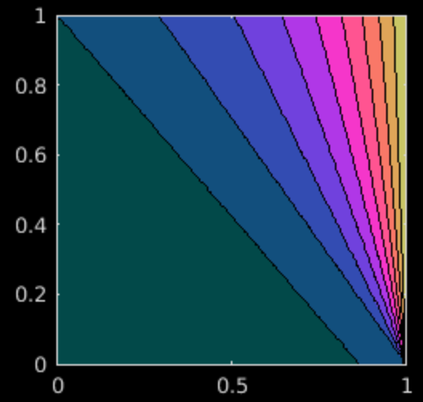
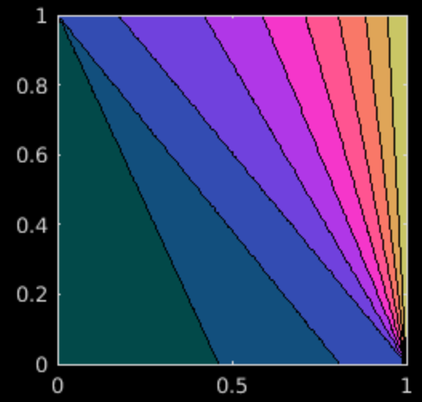


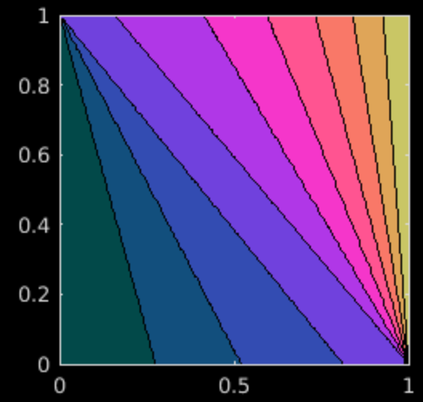
0.33333



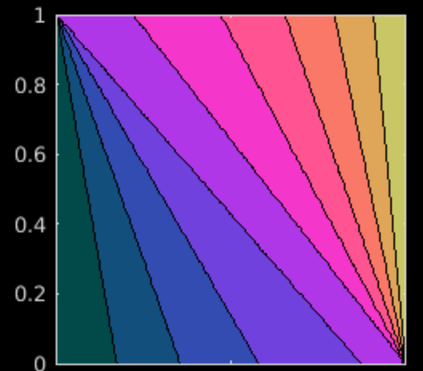
0.5



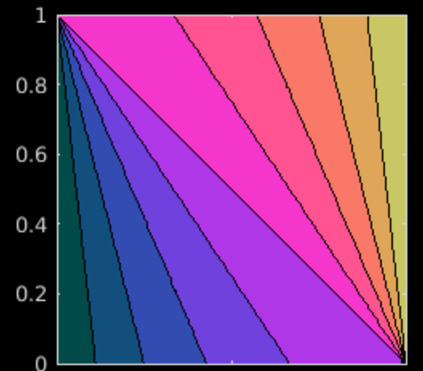
0.66667



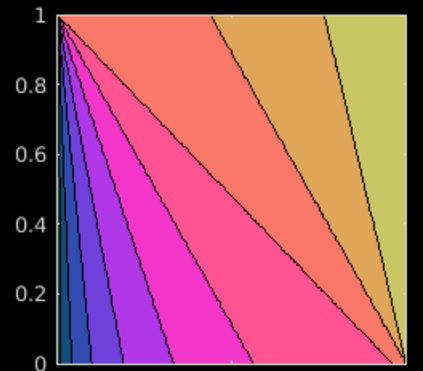
0.83333



1



2



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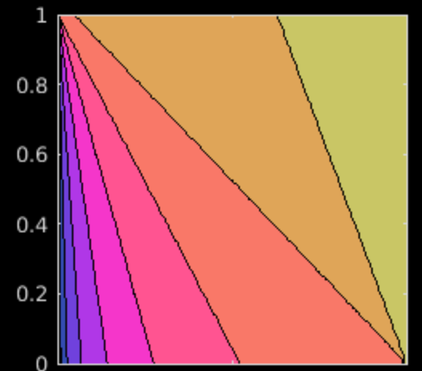

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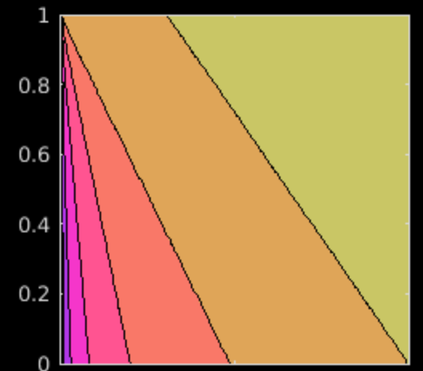

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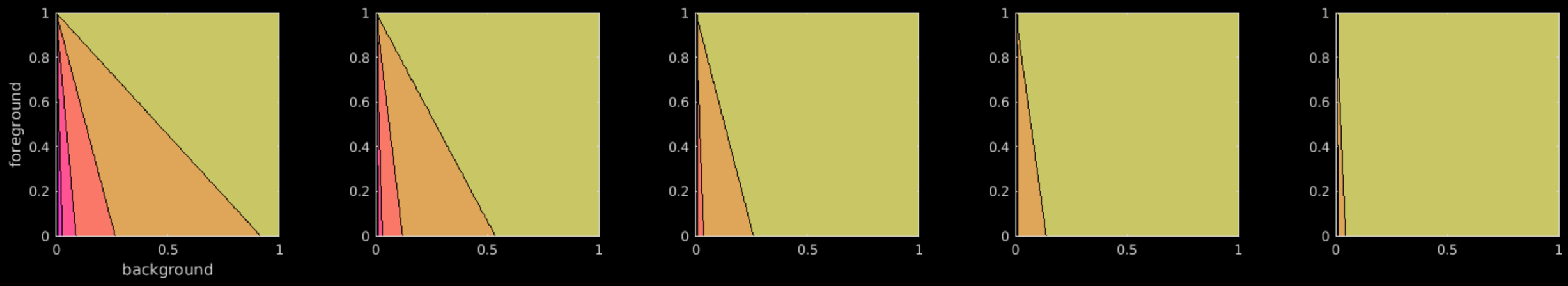

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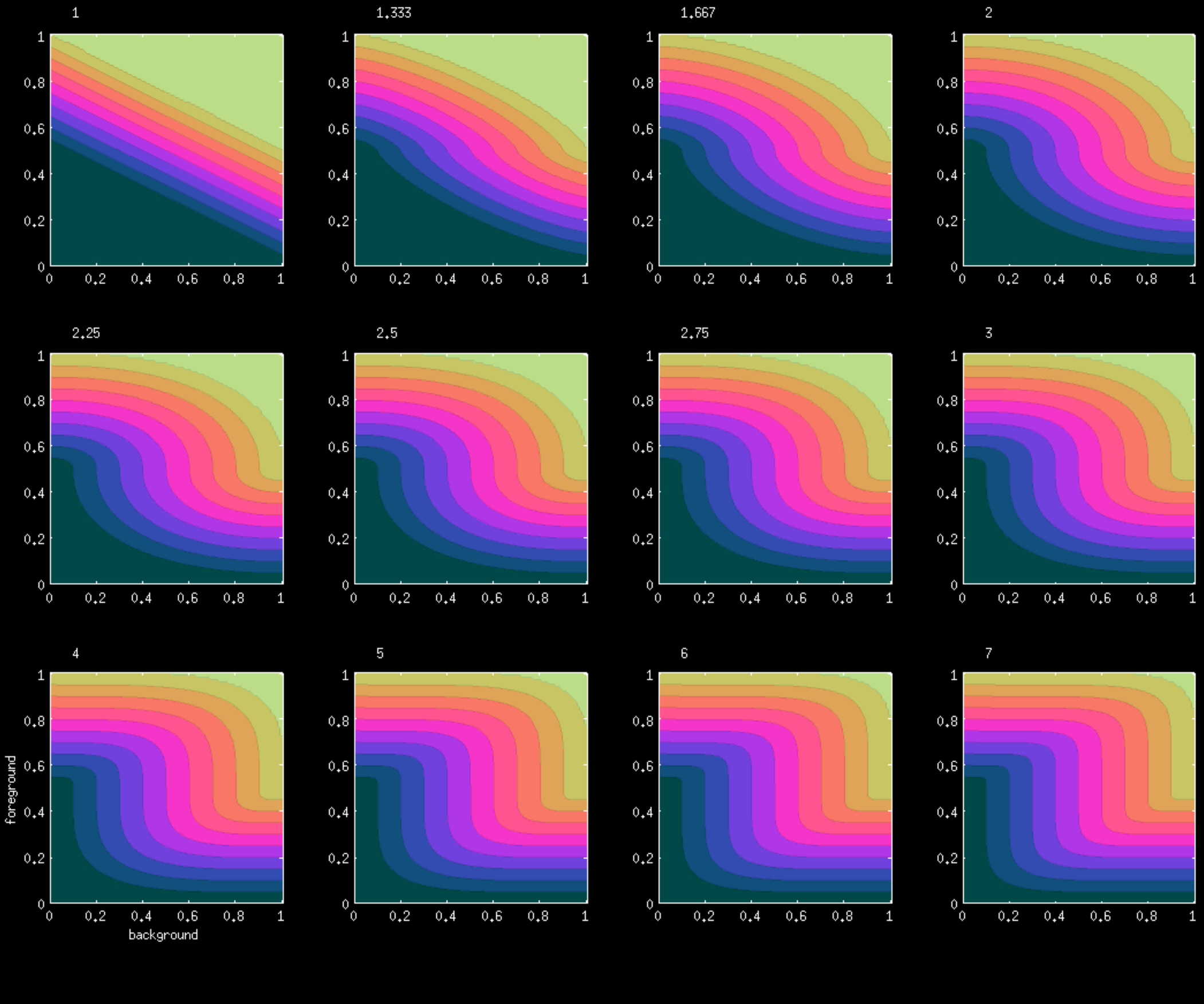

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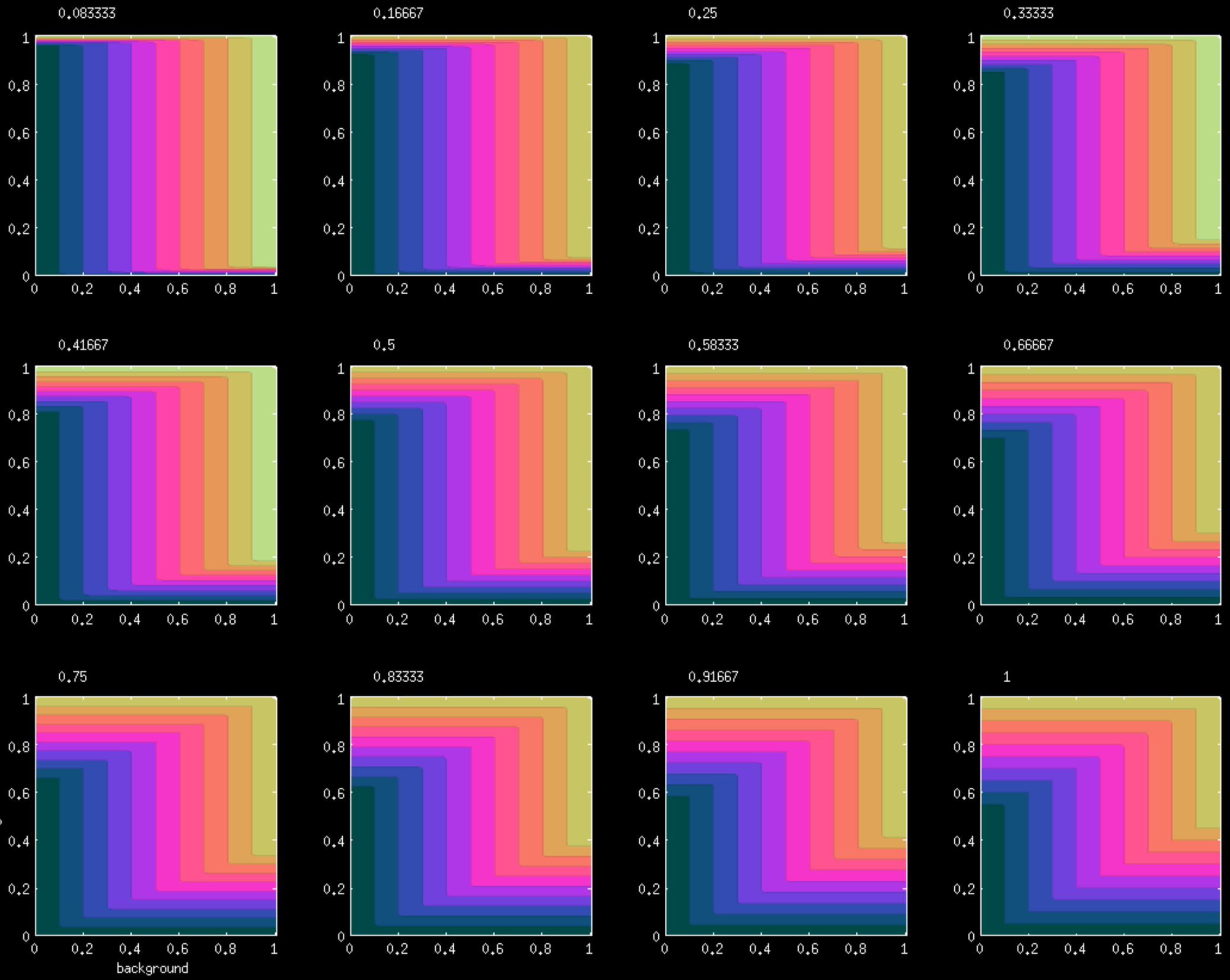
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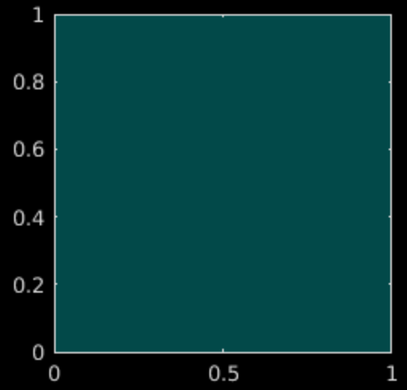

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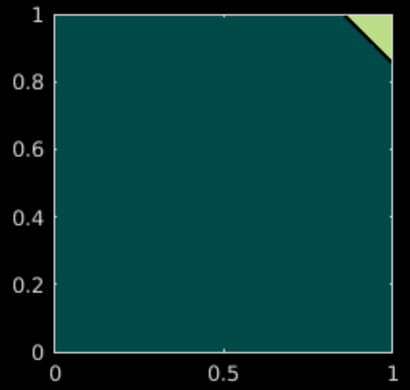

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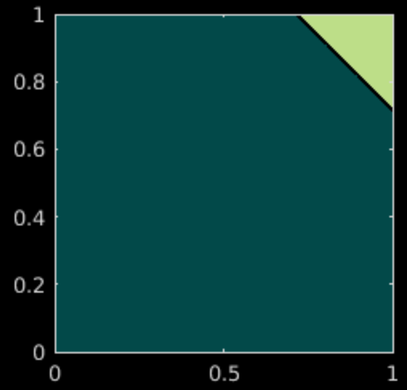

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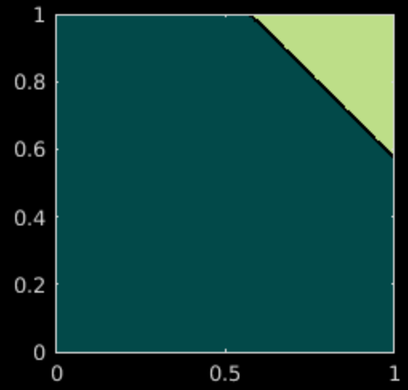

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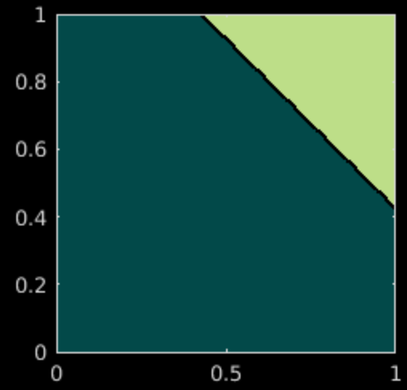

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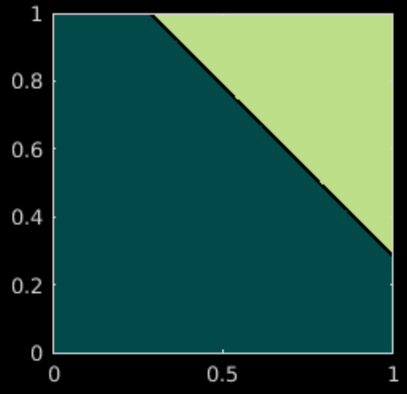

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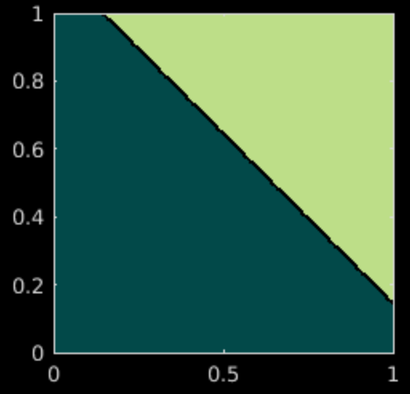

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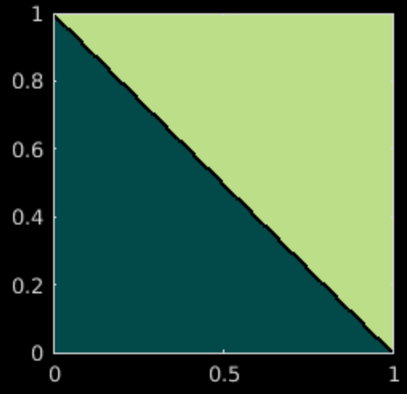

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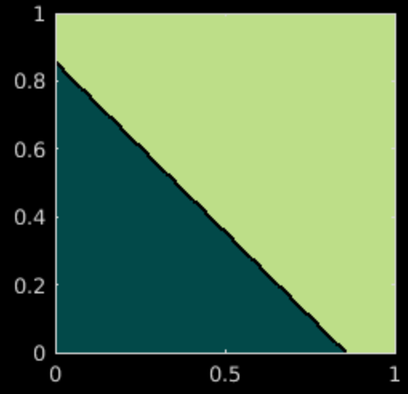

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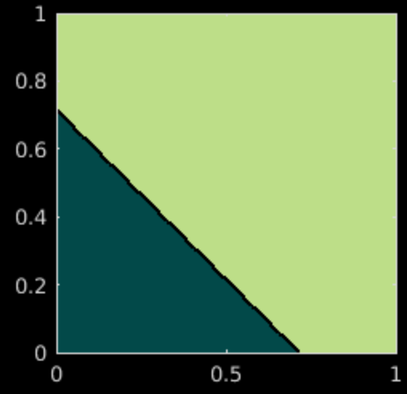

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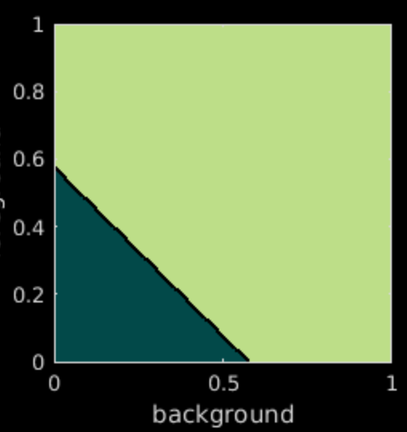

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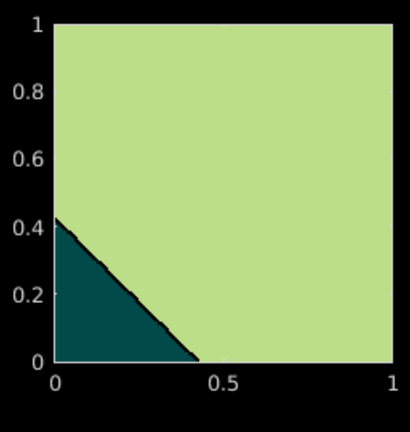

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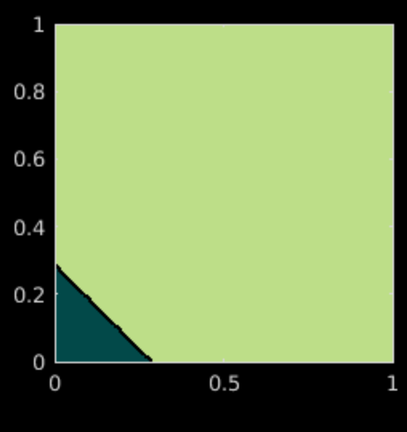

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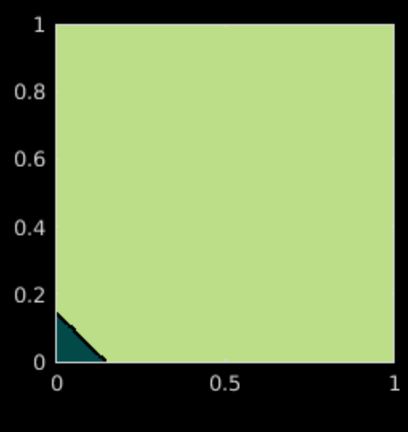

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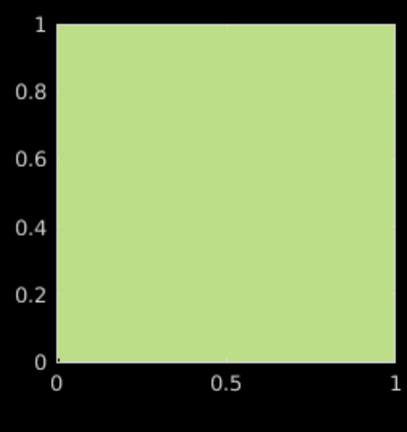

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1.4286 | 1.5714 | 1.7143 | 1.8571 | 2

foreground

background

hardmixkr

0 0.14286 0.28571 0.42857 0.57143

0.71429 0.85714 1 1.1429 1.2857

1.4286 1.5714 1.7143 1.8571 2

foreground

background

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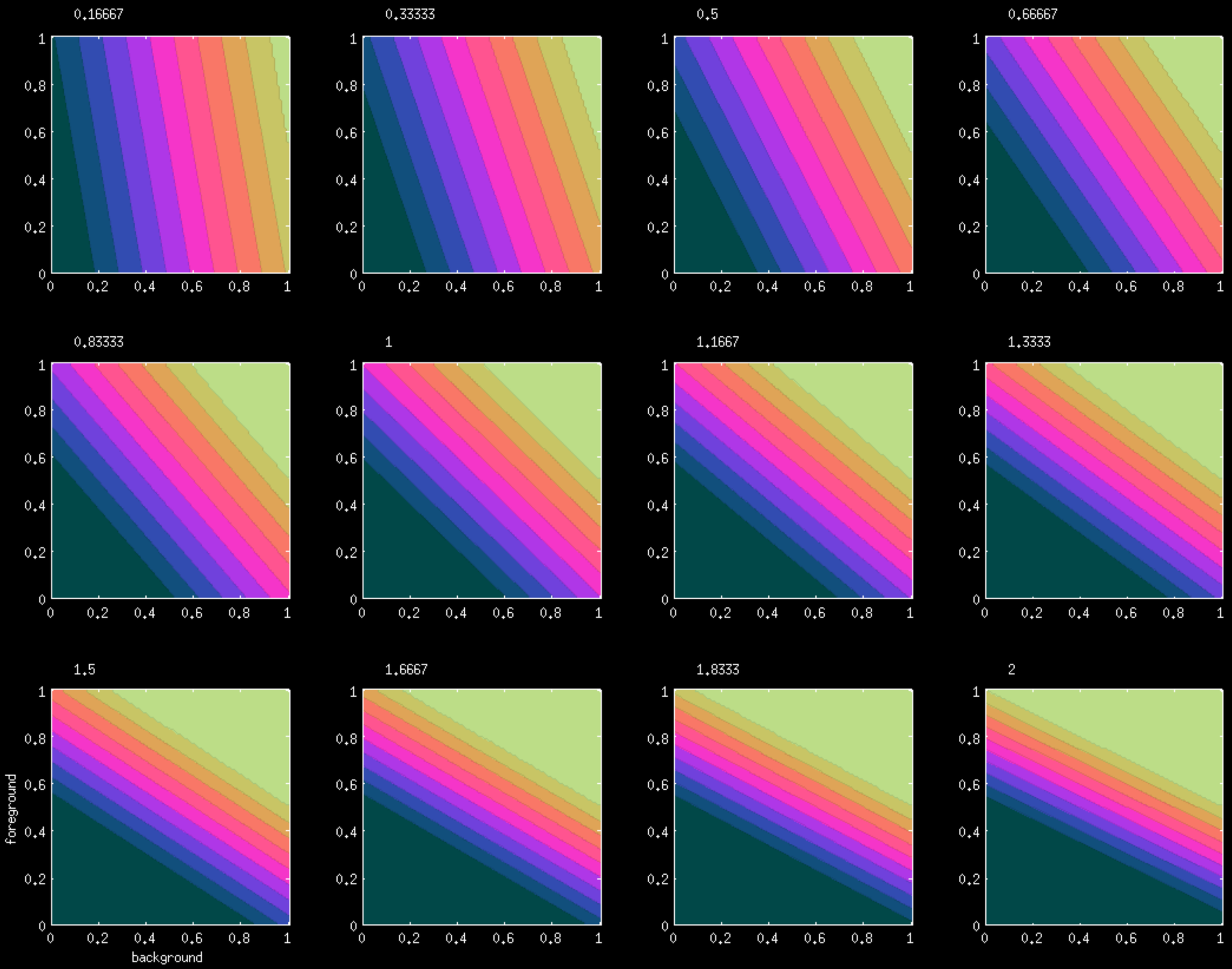
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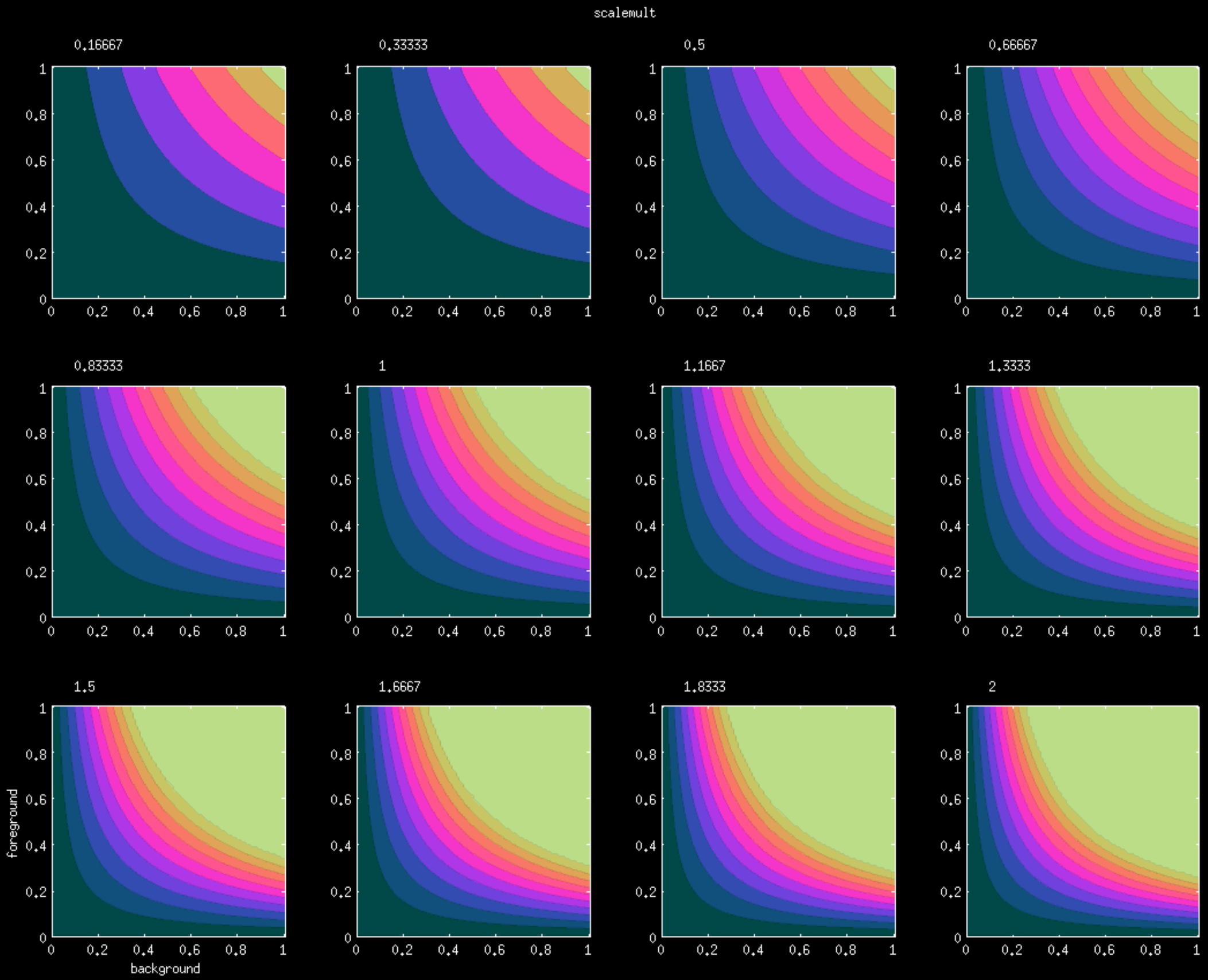
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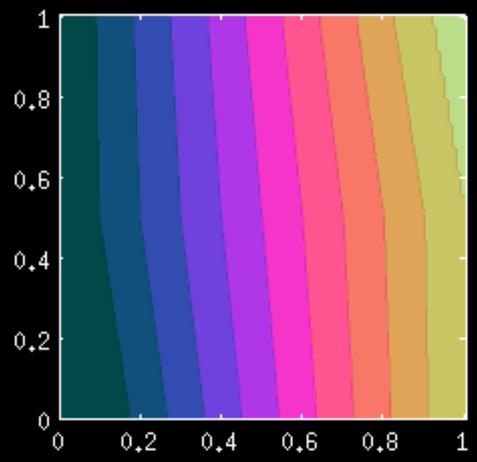

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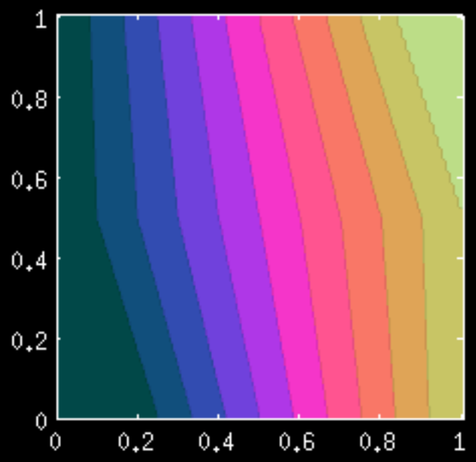

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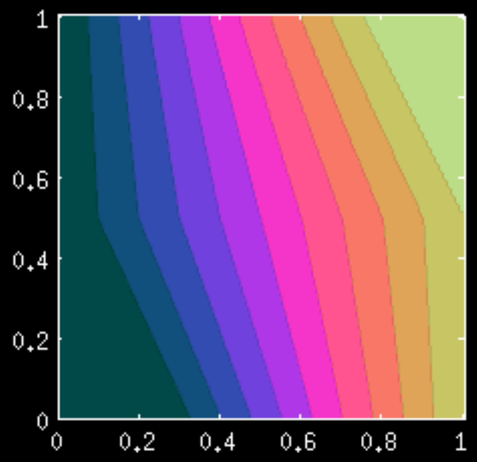

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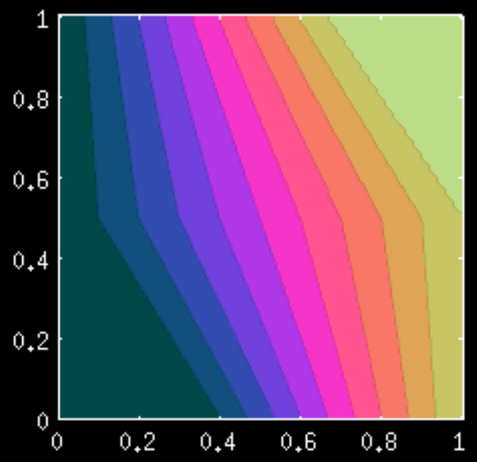

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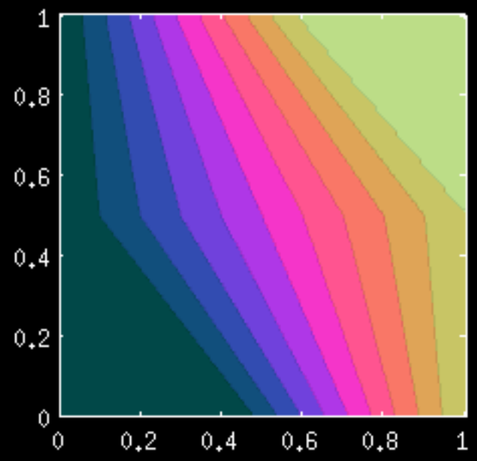

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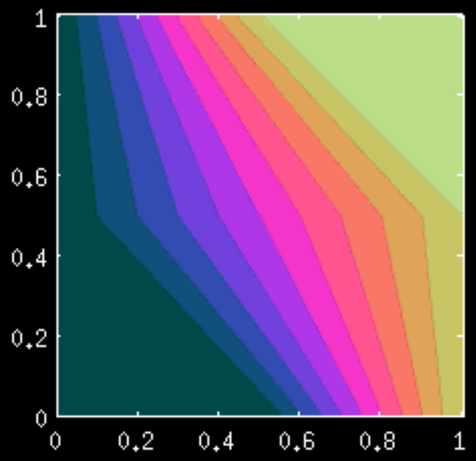

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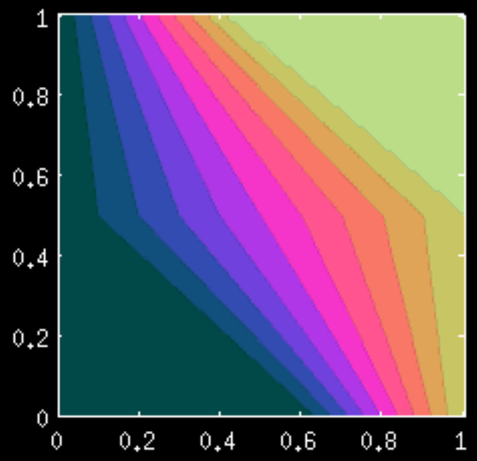

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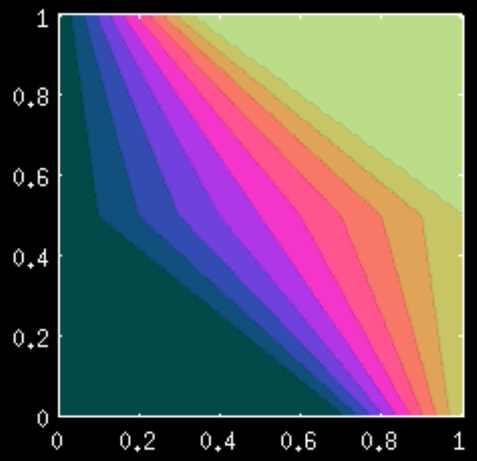

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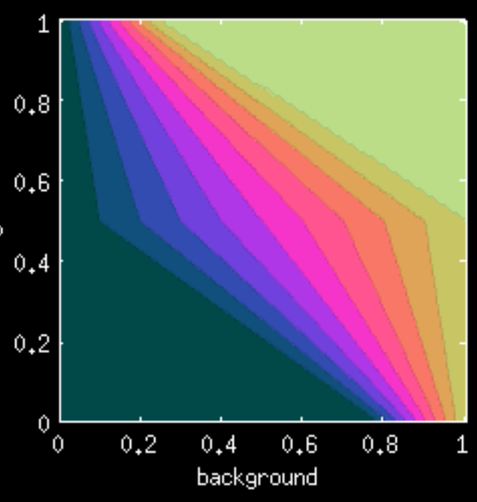

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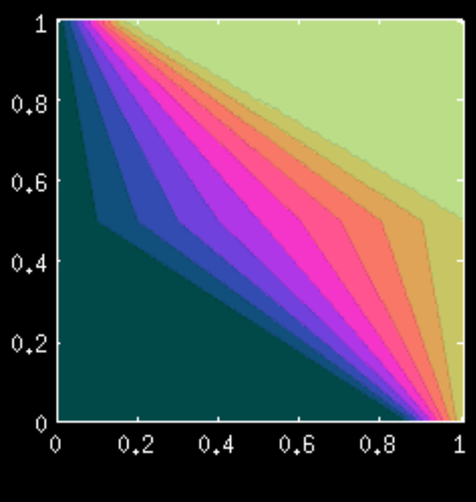

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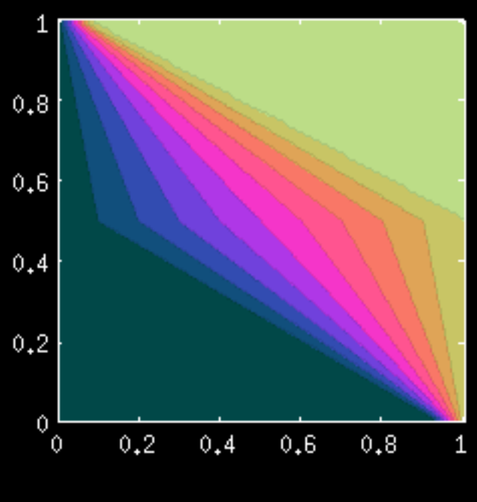

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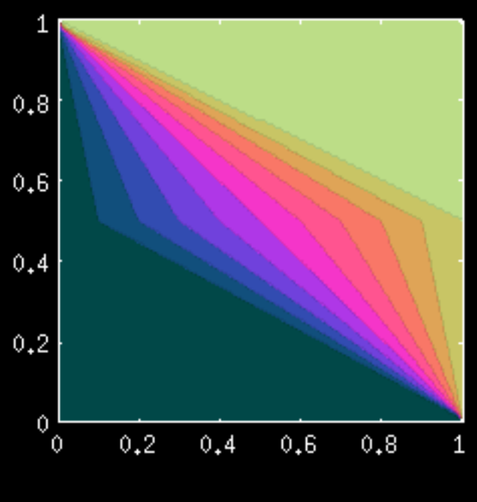

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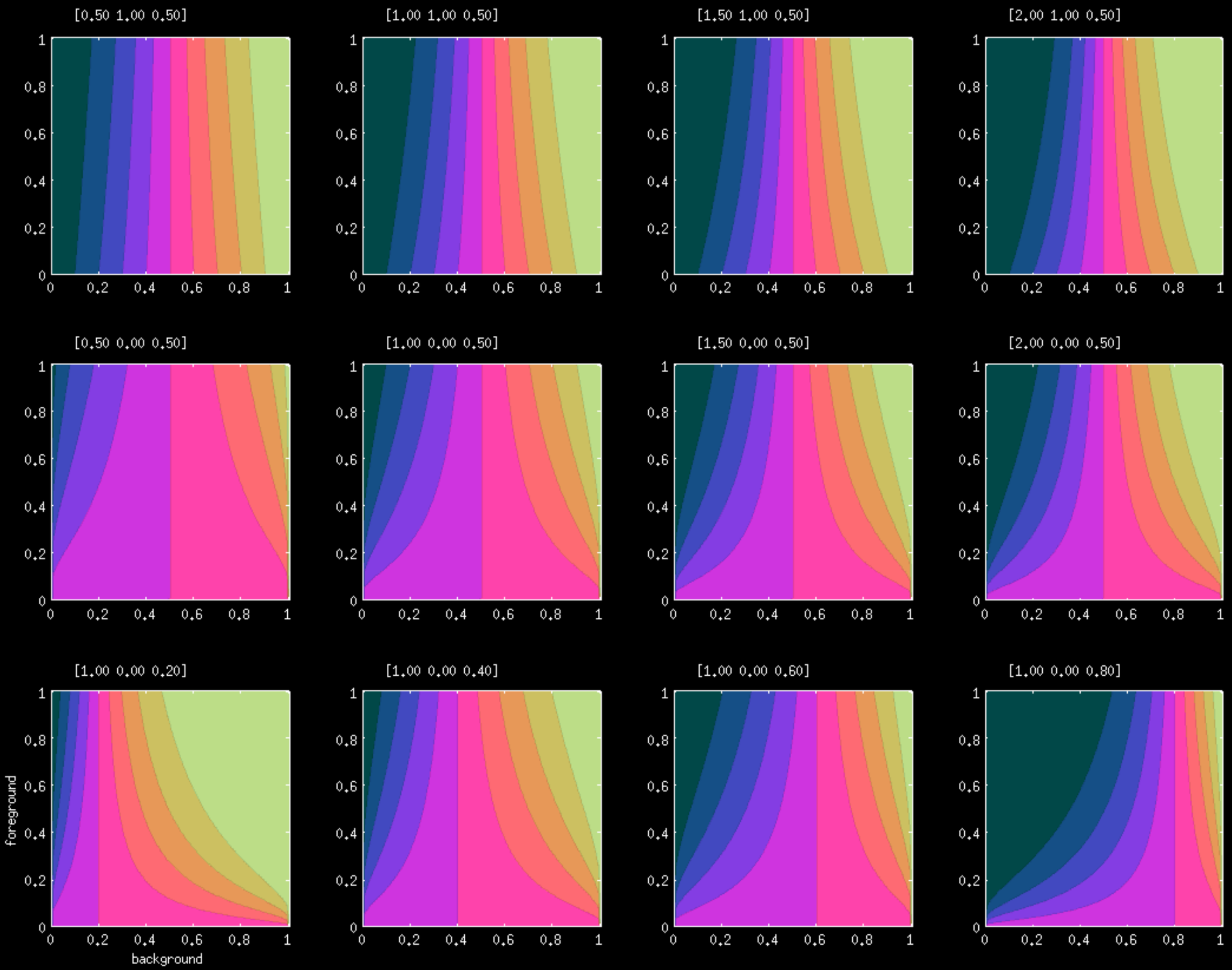
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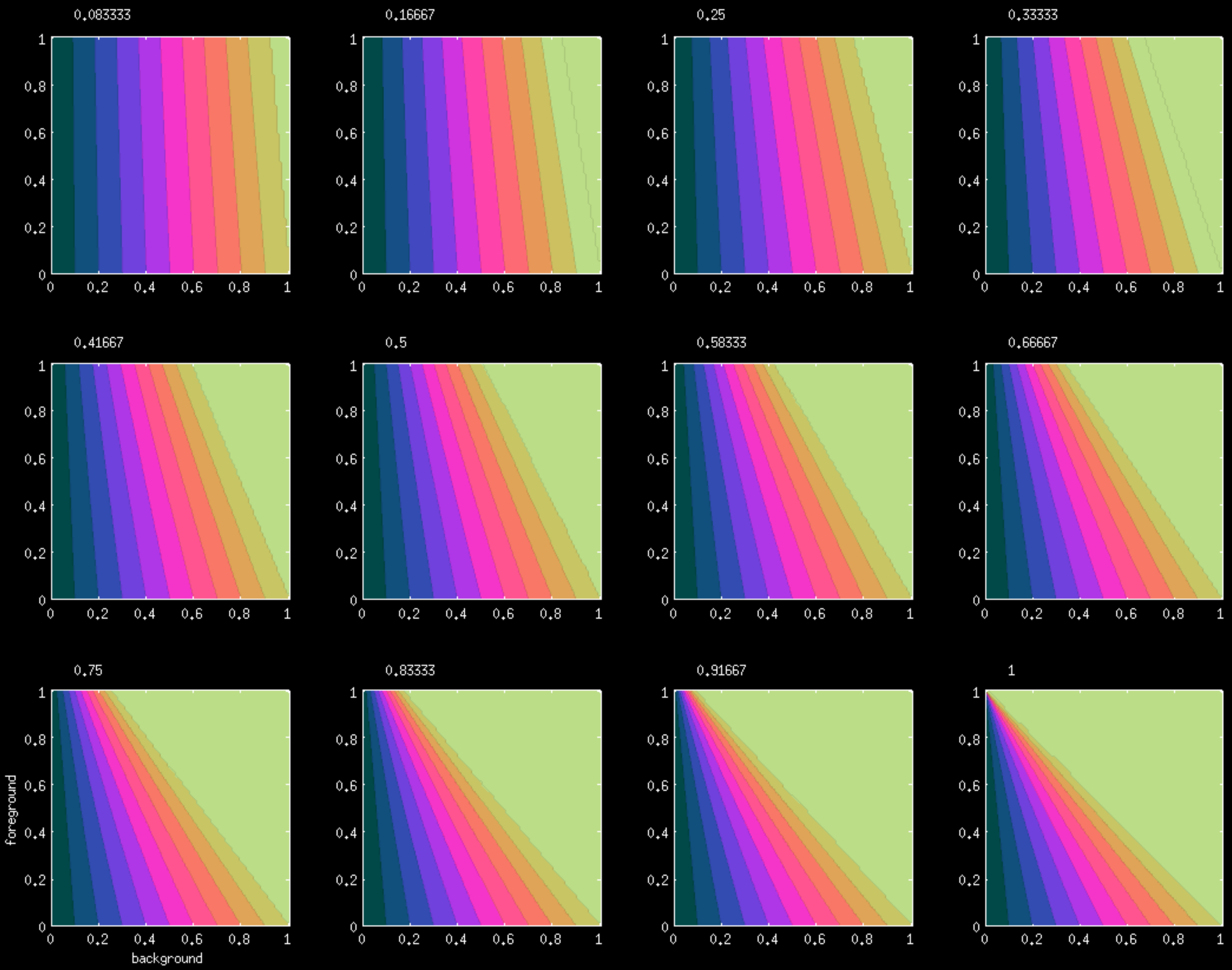
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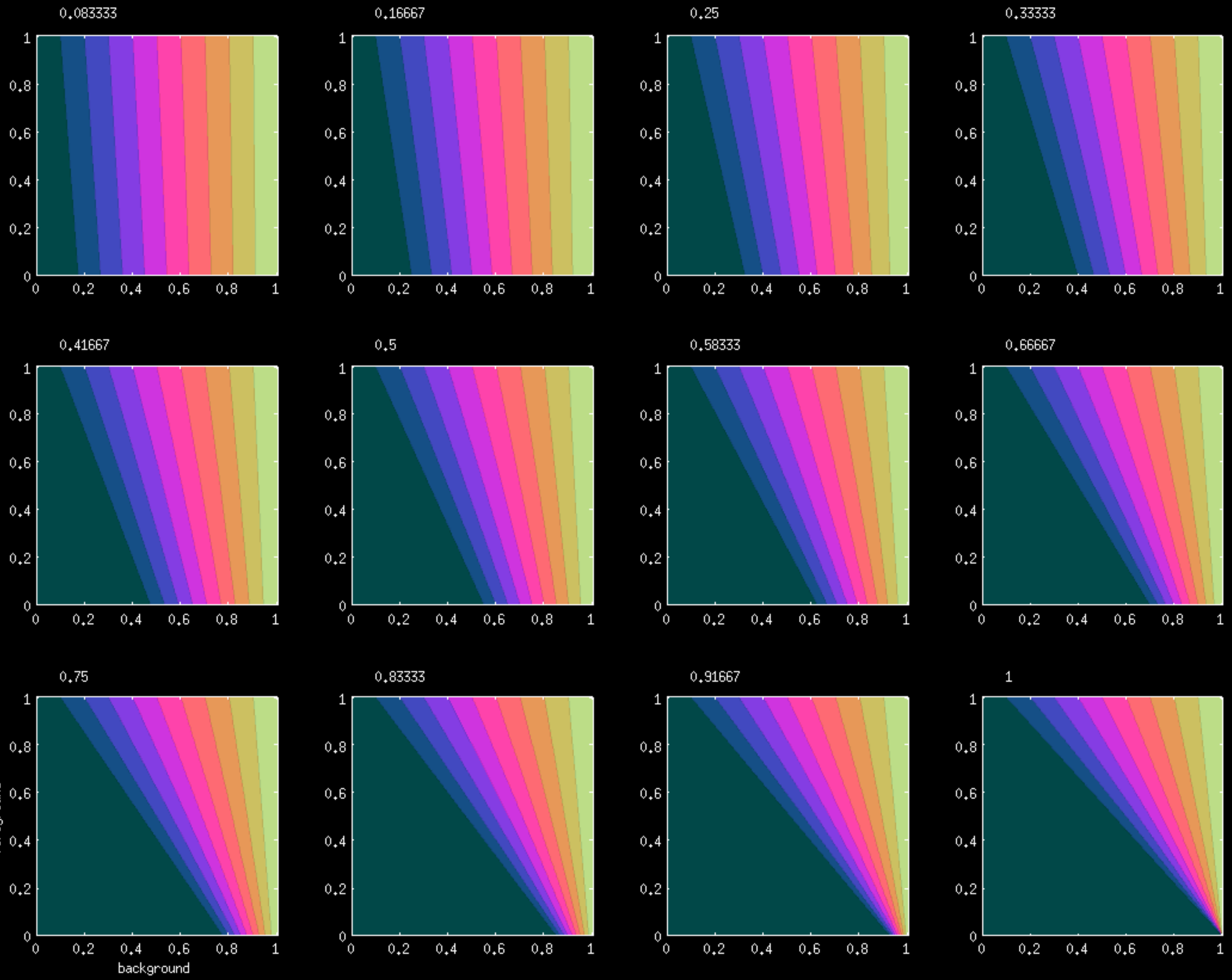
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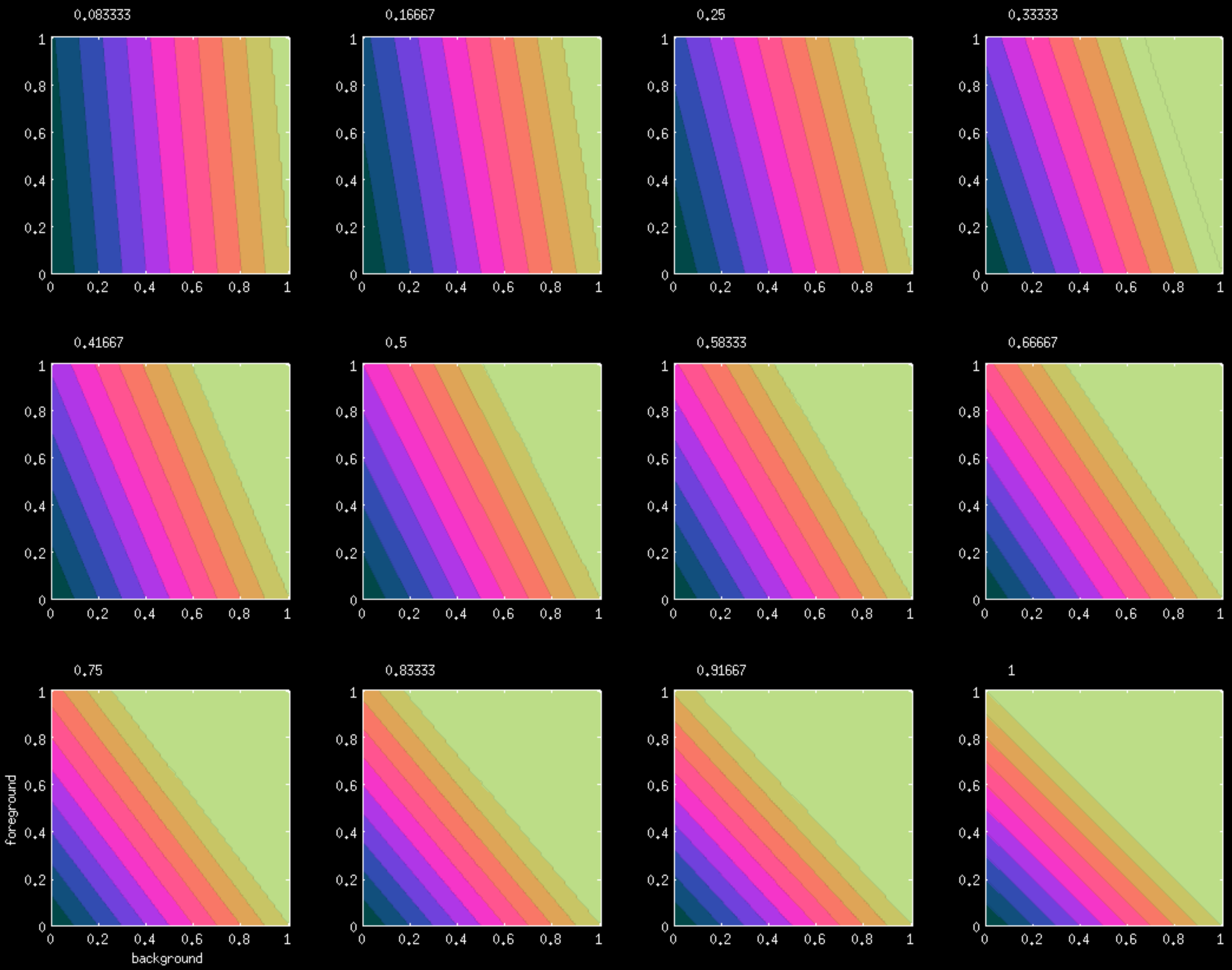

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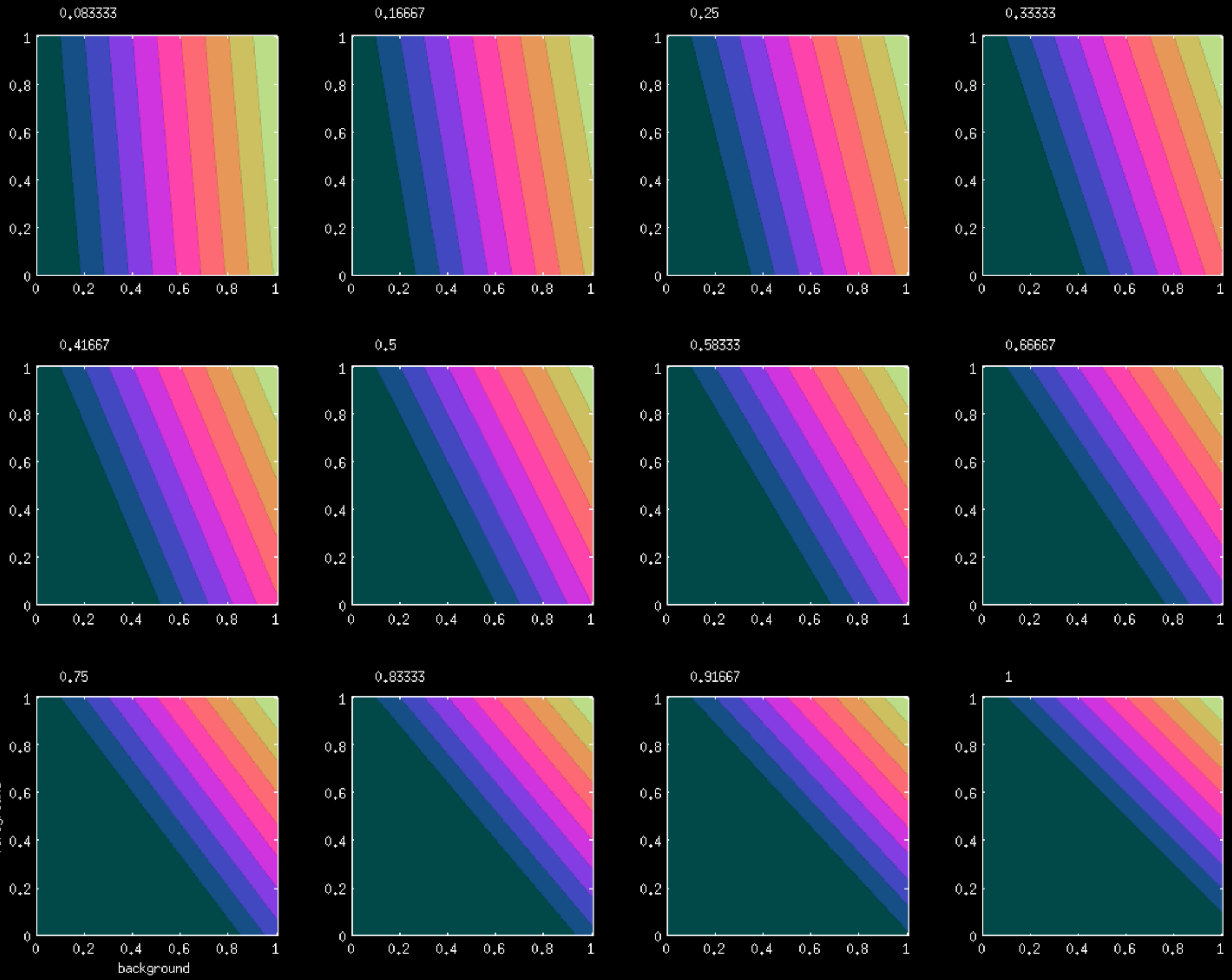
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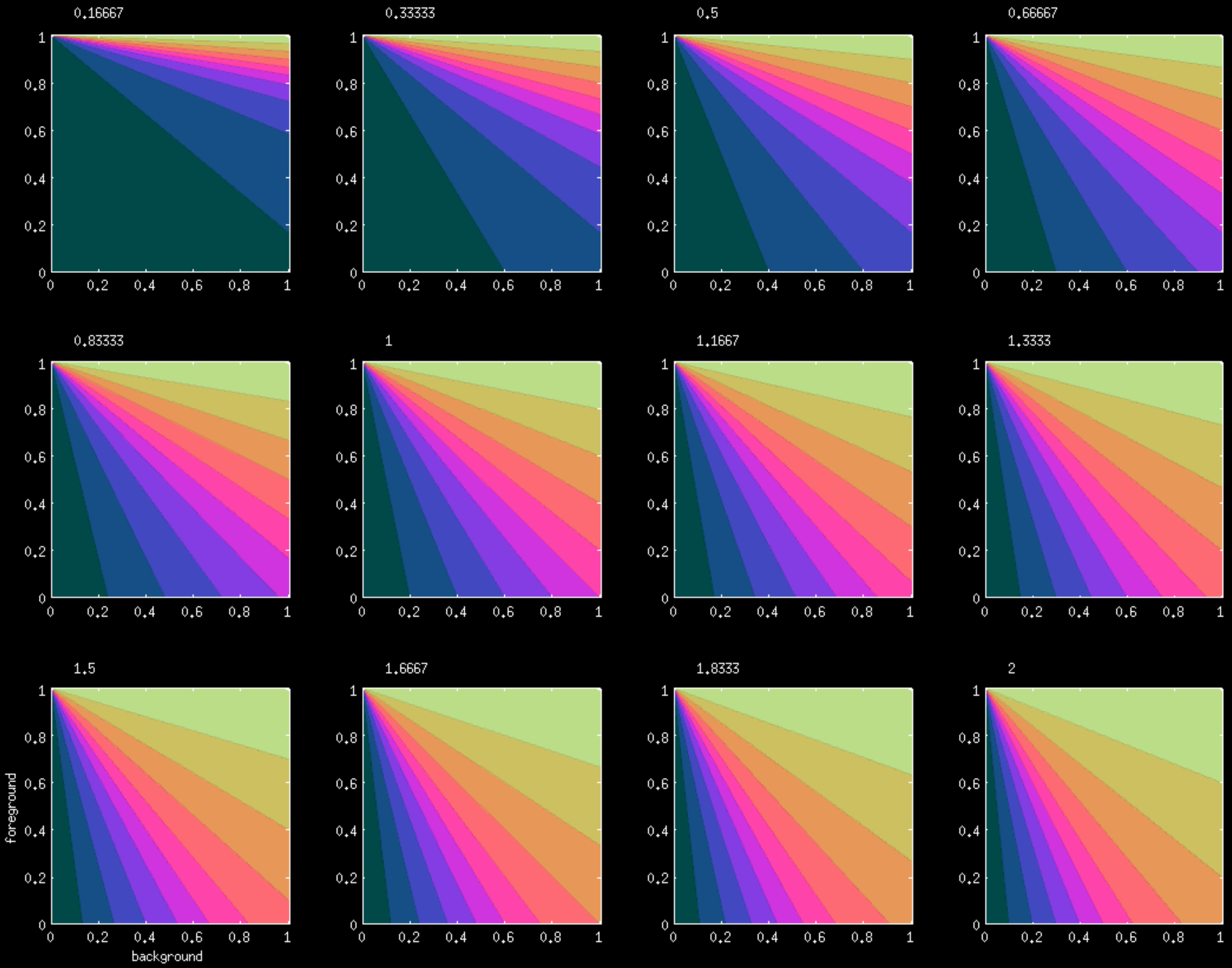
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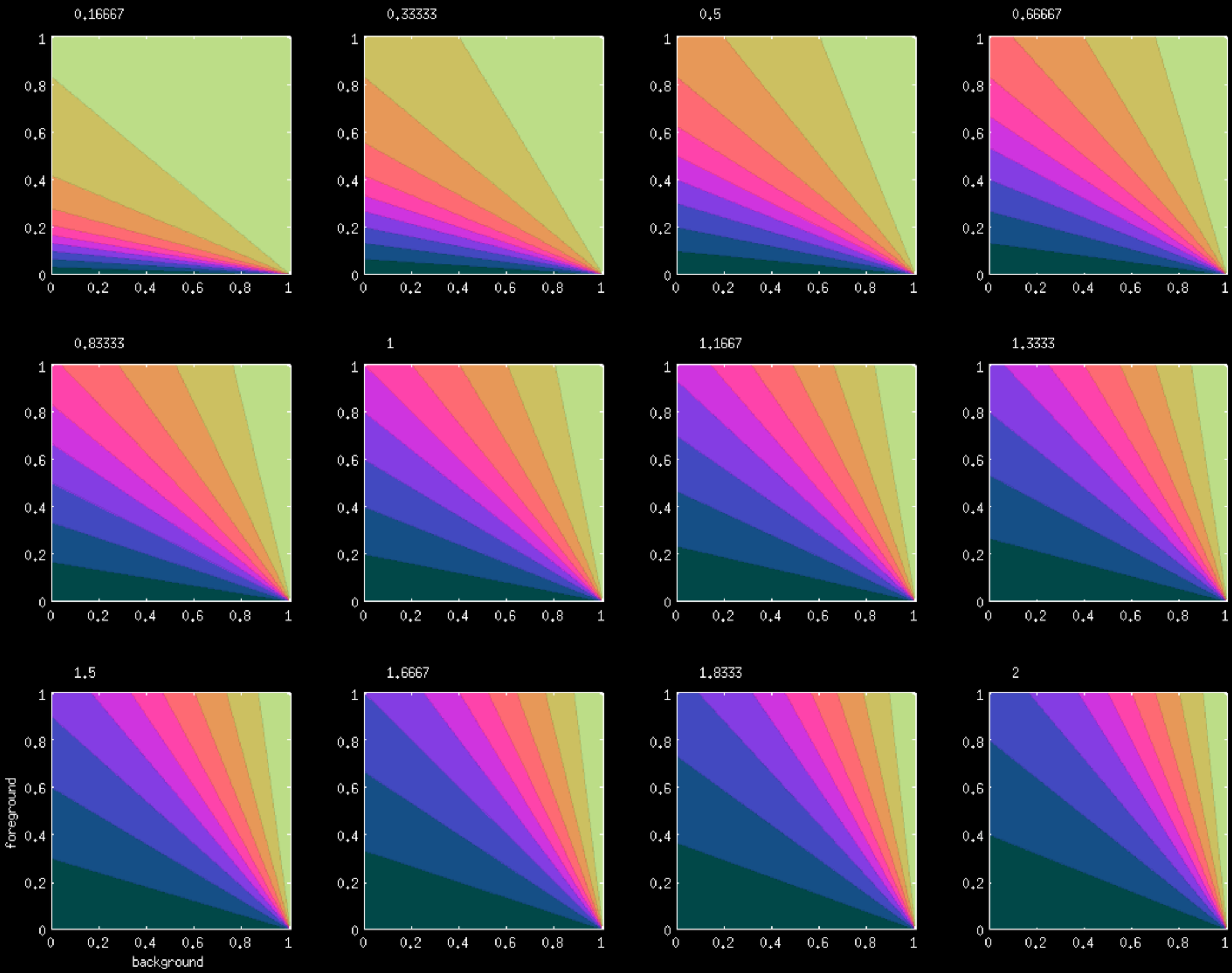
softburn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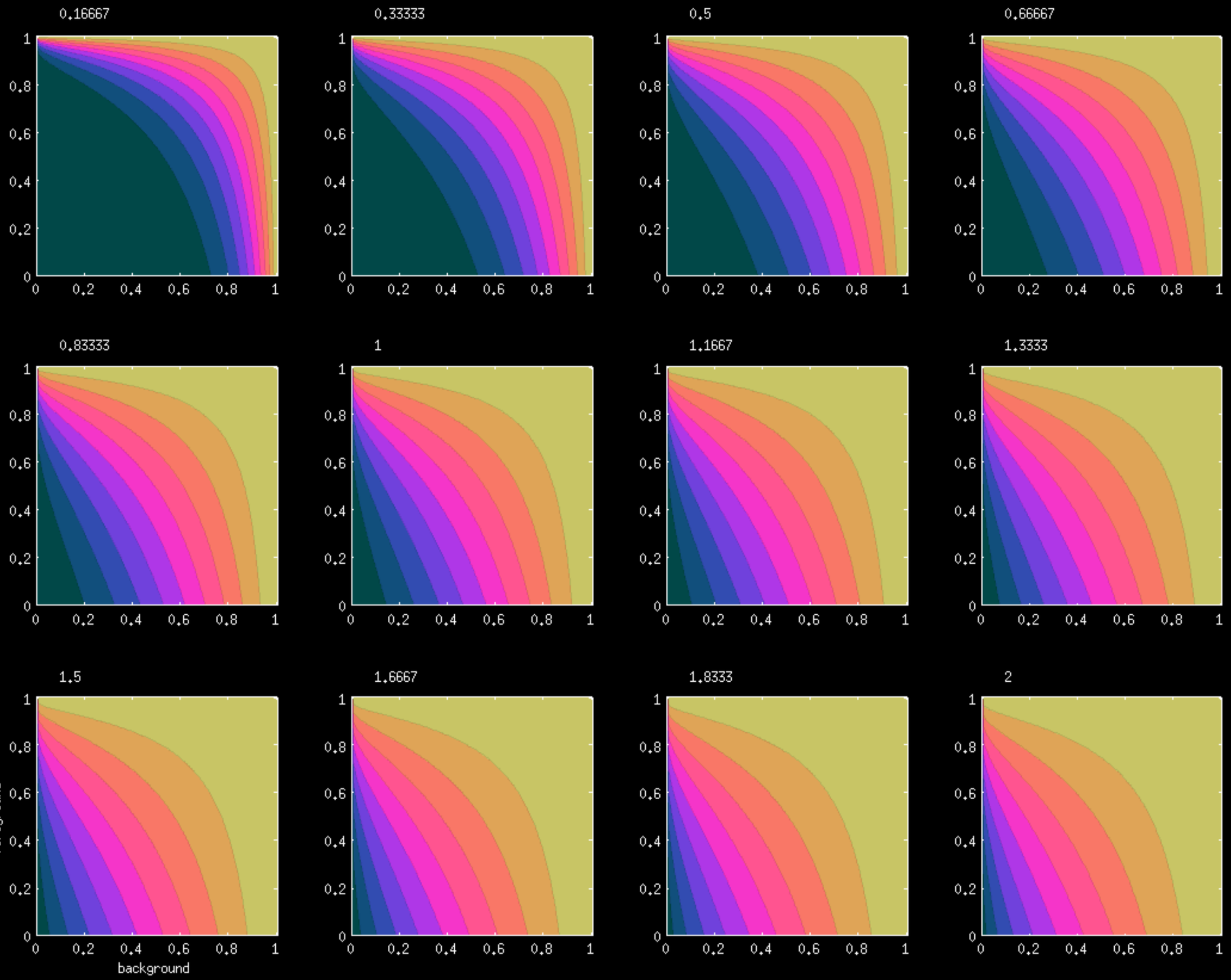
easydodge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0.83333
1
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foreground
background
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0.4
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0.8
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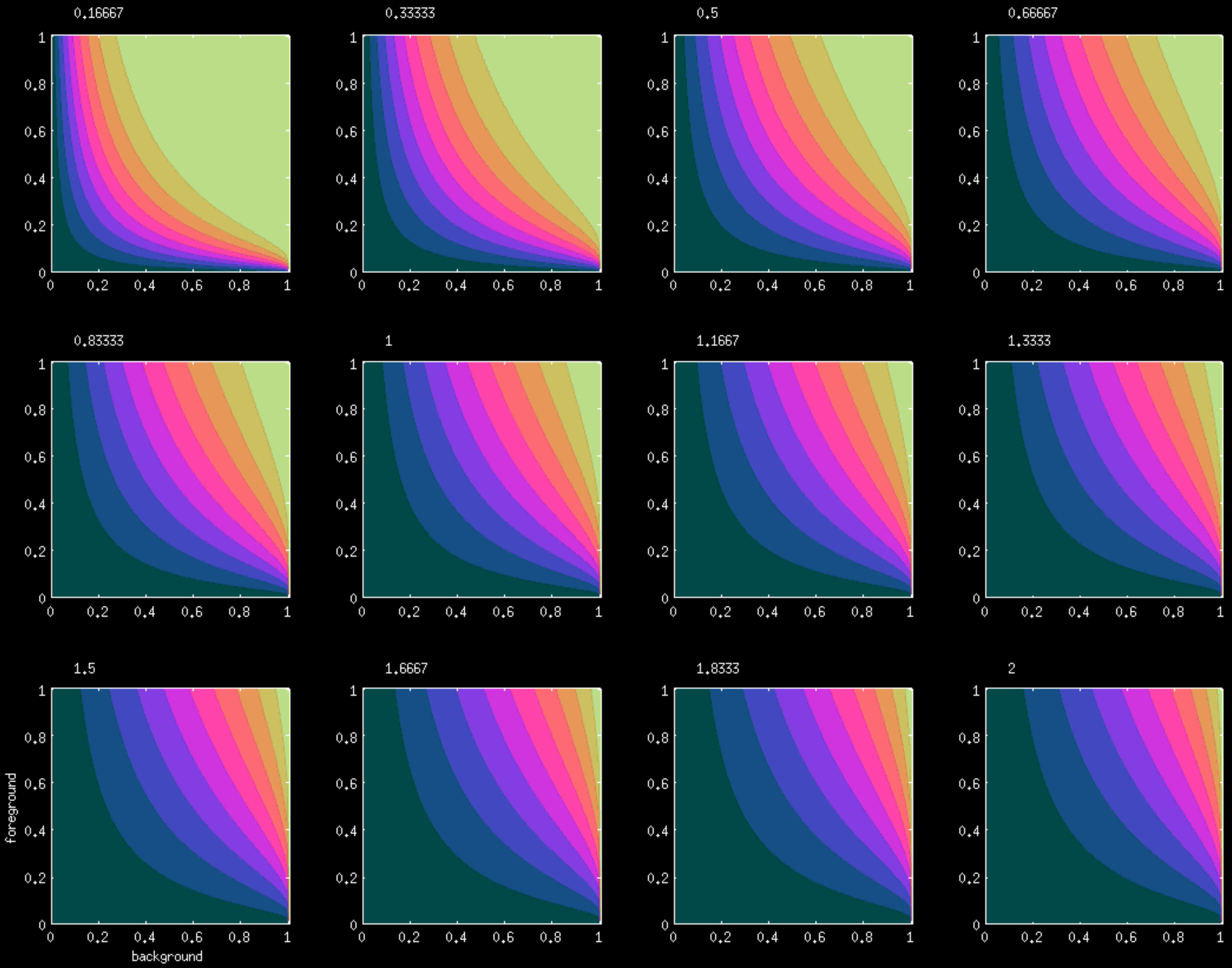
easyburn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background
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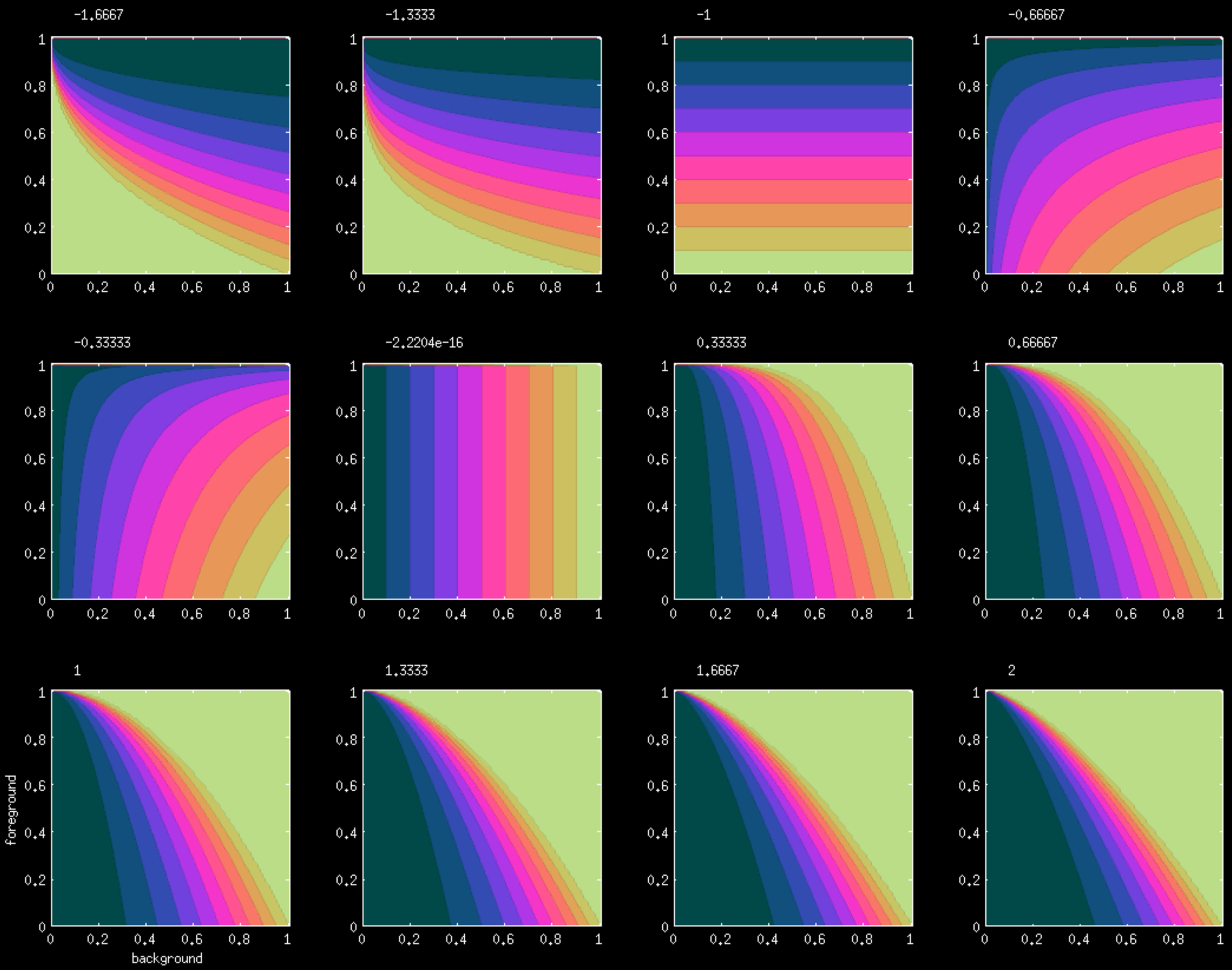
0.4
0.6
0.8
1

glow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foreground
background
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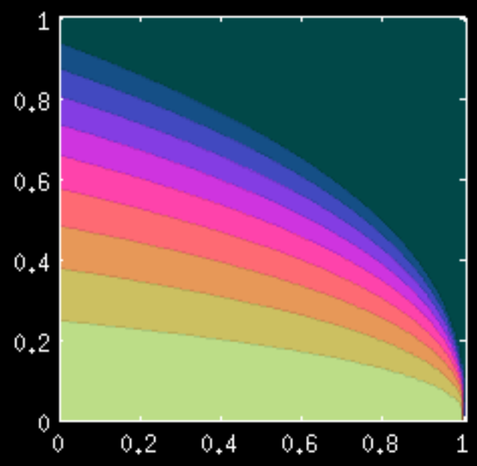
0.6
0.8
1

heat

-1.6667



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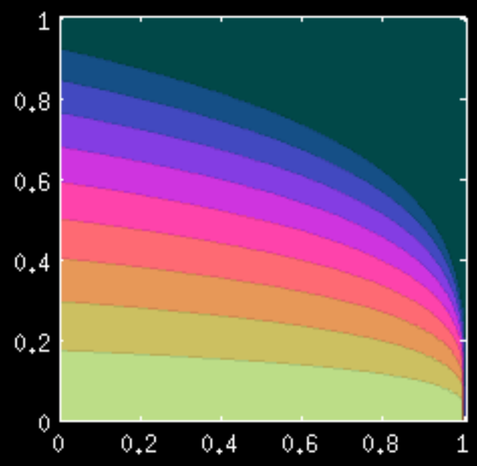

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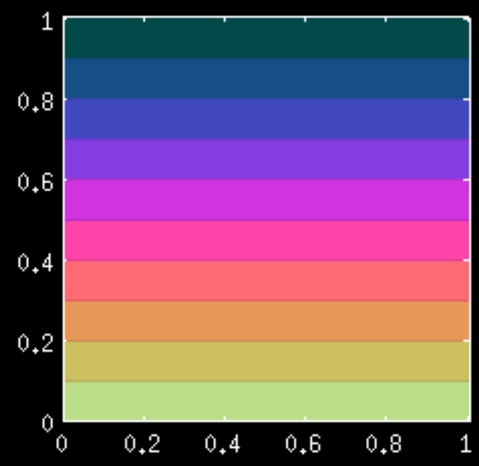

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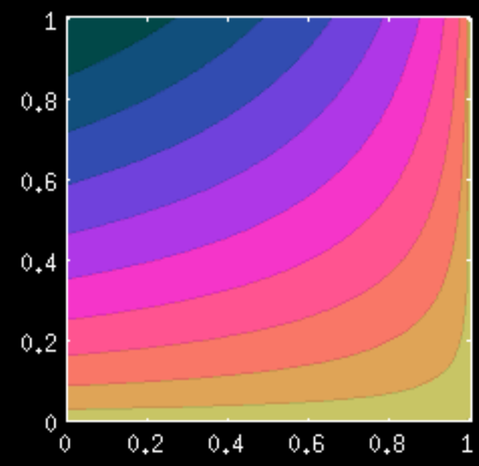

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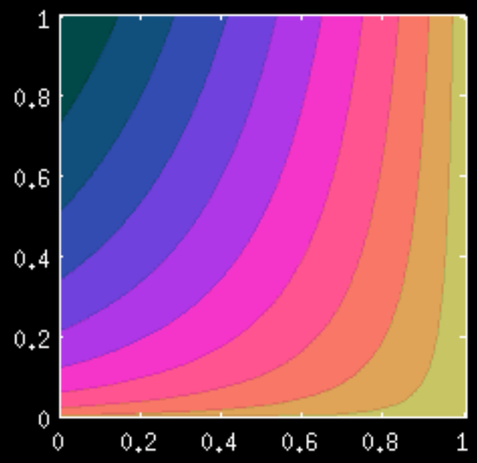

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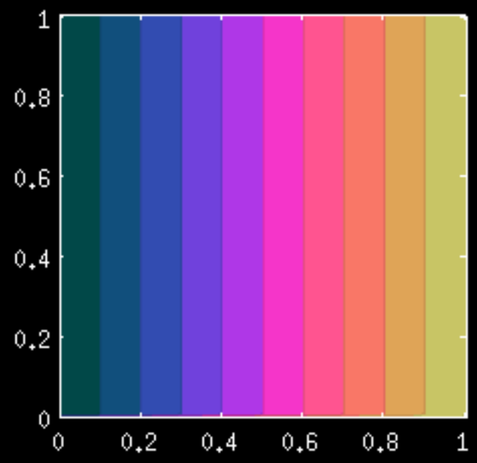

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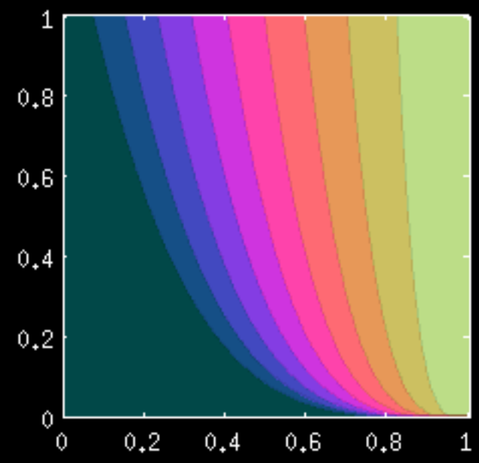

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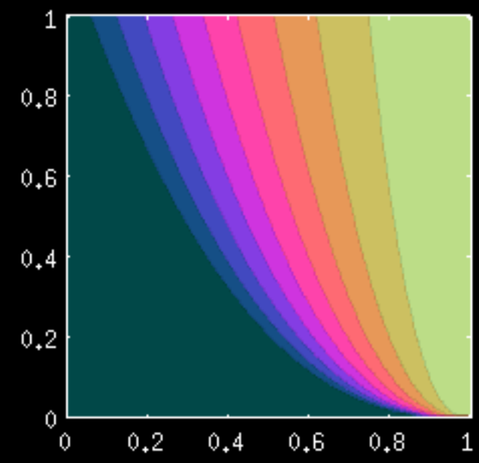

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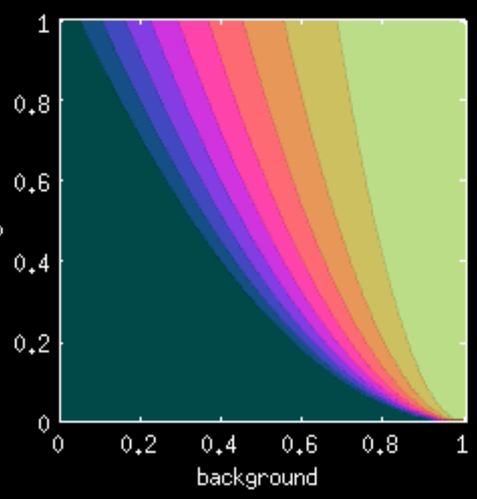

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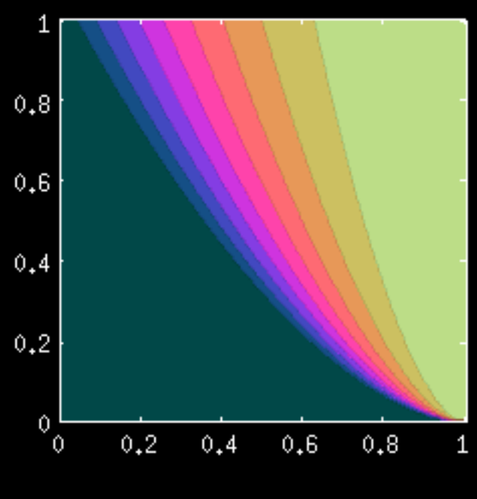

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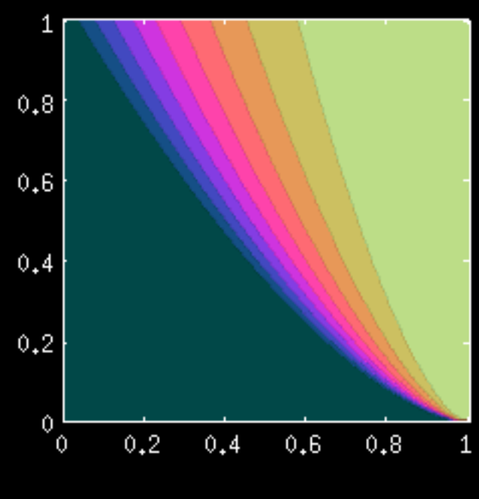

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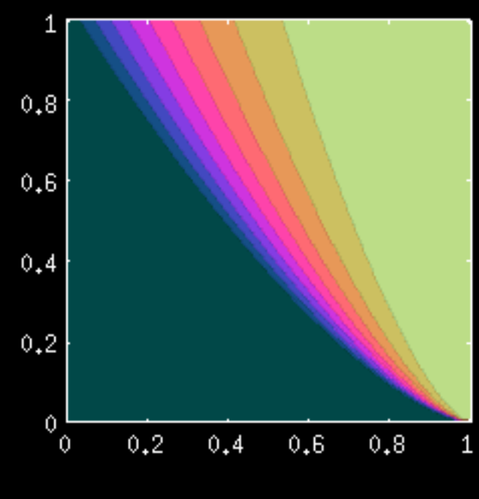
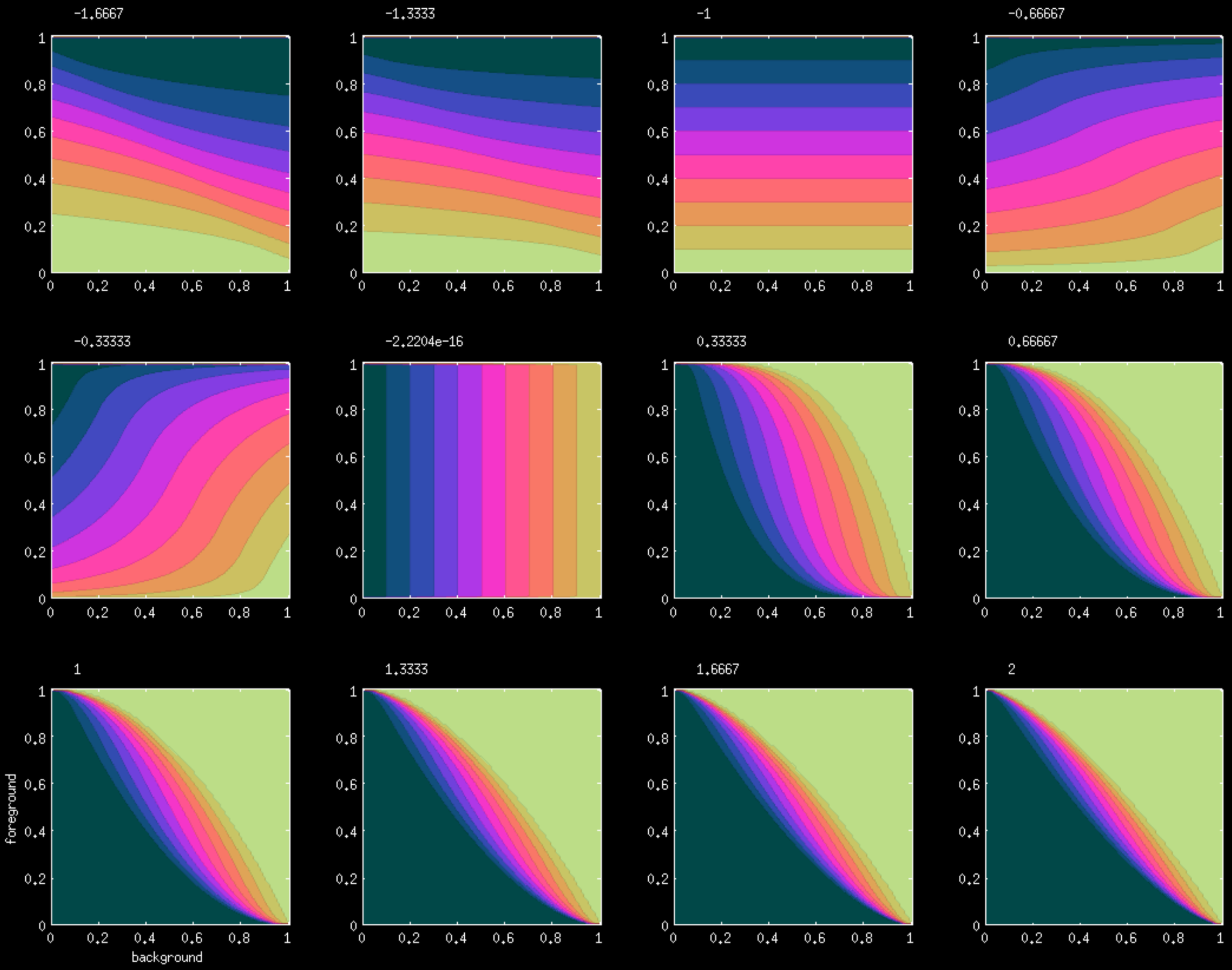


gleat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1.6667
2
foreground
background
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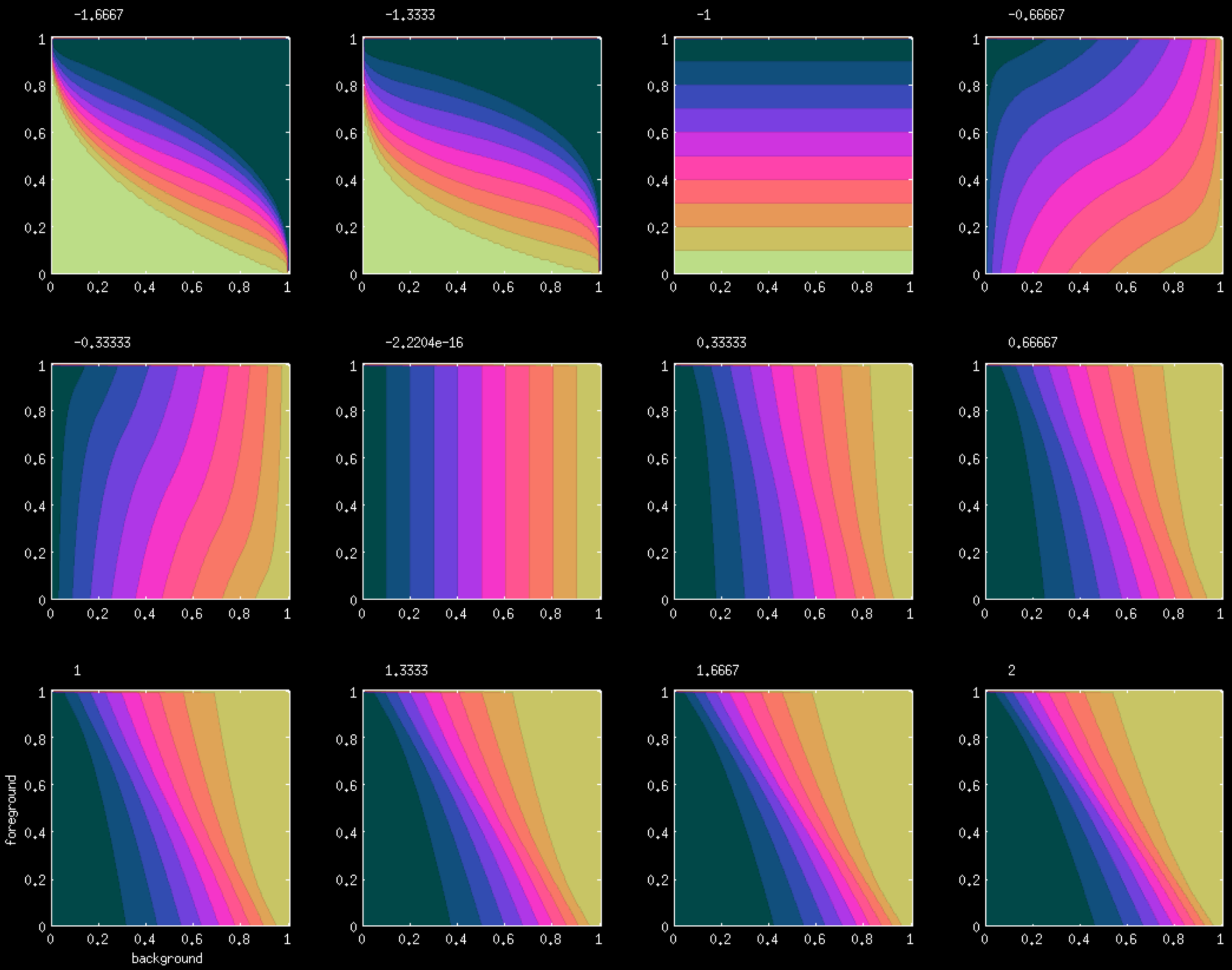
0.2
0.4
0.6
0.8
1

below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2
foreground
background
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0.6
0.8
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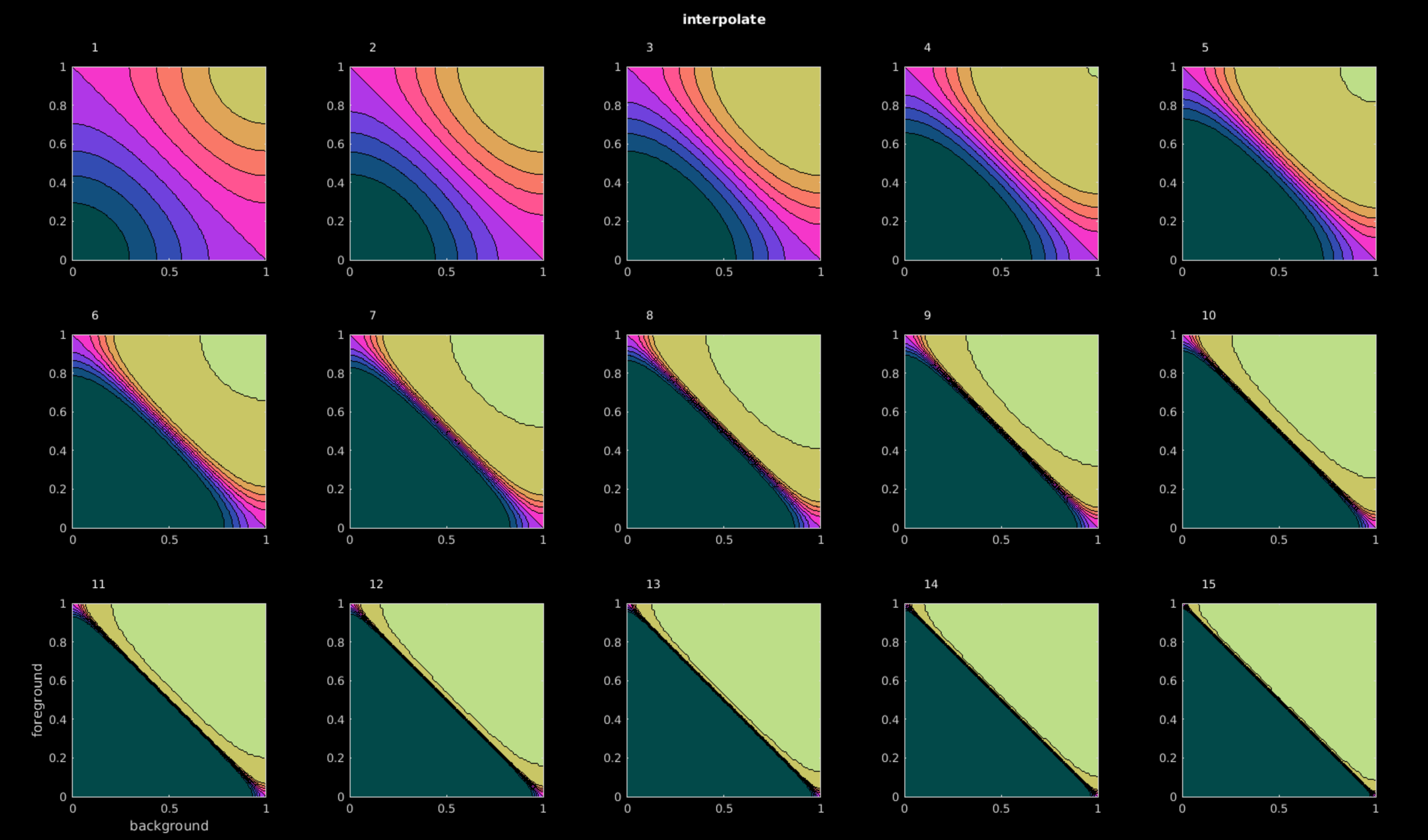
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12
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14
15
foreground
background
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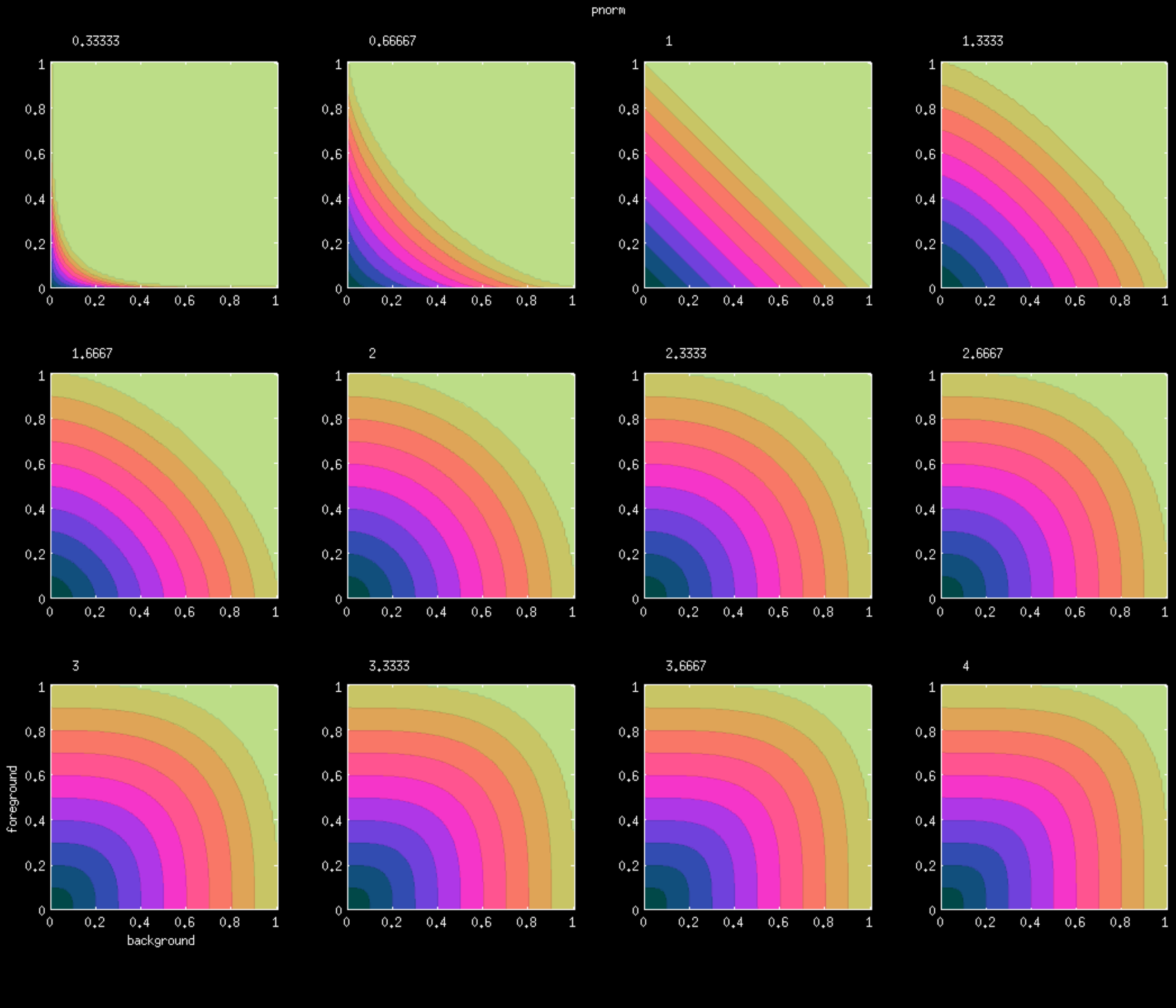
0.4
0.6
0.8
1
0.5


pnorm
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3
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3.6667
4
foreground
background
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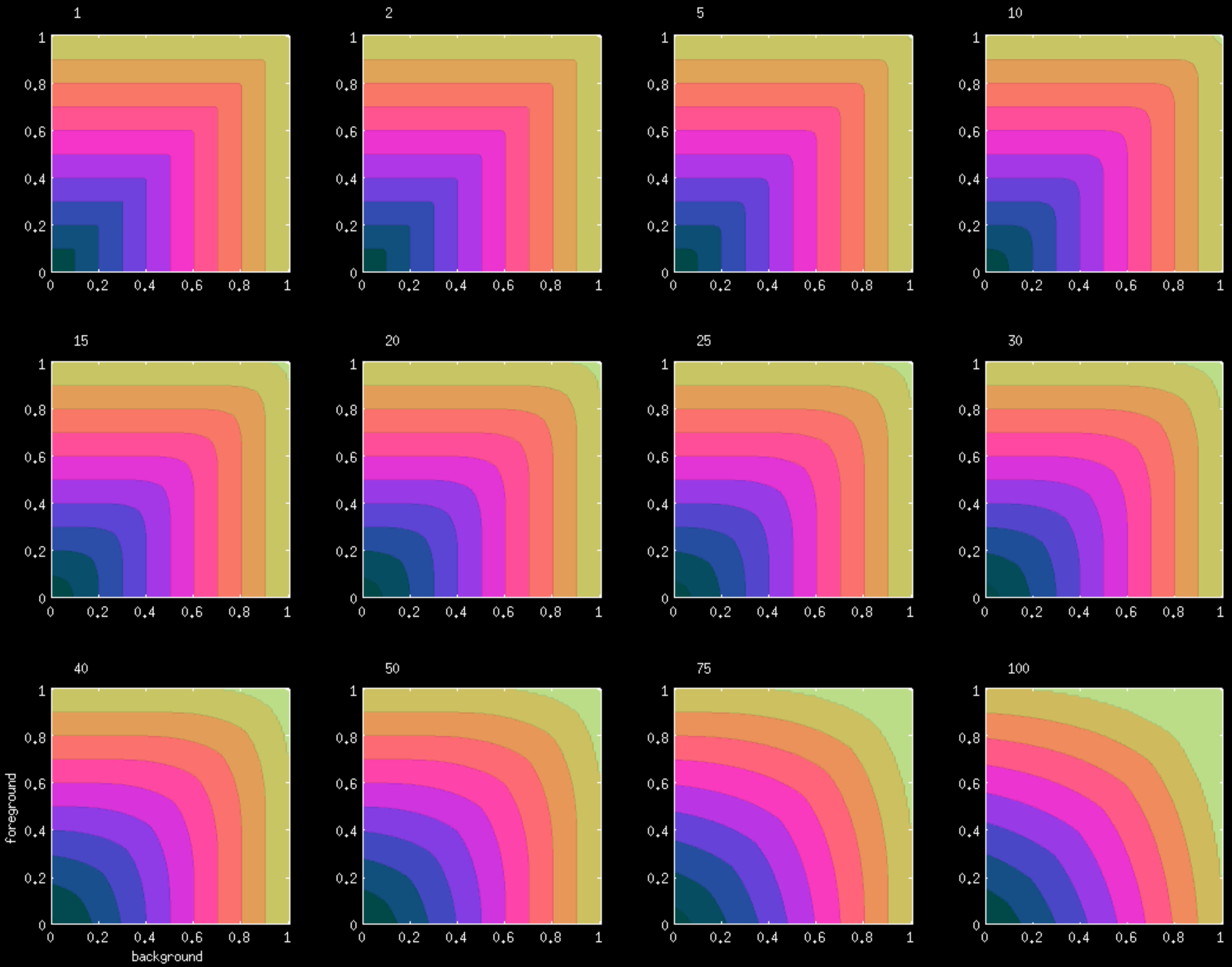
0.4
0.6
0.8
1

lightenrgb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foreground
background
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0.6
0.8
1