
Constants

kCellSpacing: Spacing between items (horizontally and vertically)

kMarginsSpacing: Left and right margins

kThumbnailSize: 144 points max in both directions

iPhone 2G, 3G, 3GS, 4, 4s: 320 x 480 points

iPhone 5, 5s, 5c, SE: 320 x 568 points

iPhone 6, 6s, 7, 8: 375 x 667 points

iPhone 6+, 6s+, 7+, 8+: 414 x 736 points

iPhone X: 375 x 812 points

iPad 2, Air, Air 2, Pro 9.7-inch: 768 x 1024 points

iPad Pro 10.5-inch: 834 x 1112 points

iPad Pro 12.9-inch: 1024 x 1366 points

Case of a grid

Thumbnails should always be available on server (default max size of 144 x 144 points).

We display at least 3 thumbnails per row on any device.

Images should never exceed the thumbnails size.

(Local) In[1]:=

```
gridWidth[imagesPerRow_, imageWidth_] :=  
  {frameWidth == kMarginsSpacing + (imagesPerRow - 1) *  
    (imageWidth + kCellSpacing) + imageWidth + kMarginsSpacing}
```

Number of images per row

(Local) In[2]:=

```
imagesPerRowEq = Solve[gridWidth[imagesPerRow, 144], imagesPerRow]
```

(Local) Out[2]:=

```
{ {imagesPerRow ->  $\frac{\text{frameWidth} + \text{kCellSpacing} - 2 \text{kMarginsSpacing}}{144 + \text{kCellSpacing}}$  } }
```

Size of images

(Local) In[3]:=

```
imageSizeEq = Solve[gridWidth[imagesPerRow, imageSize], imageSize]
```

(Local) Out[3]:=

```
{ {imageSize ->  $\frac{\text{frameWidth} + \text{kCellSpacing} - \text{imagesPerRow} \text{kCellSpacing} - 2 \text{kMarginsSpacing}}{\text{imagesPerRow}}$  } }
```

Case of an iPhone 4s

(Local) In[4]:=

```
N[imagesPerRowEq /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 320}]  
Ceiling[imagesPerRow /. %]  
N[imageSizeEq /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 320, imagesPerRow → %}]
```

(Local) Out[4]=

```
{{imagesPerRow → 2.20548}}
```

(Local) Out[5]=

```
{3}
```

(Local) Out[6]=

```
{{imageSize → {105.333}}}
```

(Local) In[7]:=

```
N[imagesPerRowEq /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 480}]  
Ceiling[imagesPerRow /. %]  
N[imageSizeEq /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 480, imagesPerRow → %}]
```

(Local) Out[7]=

```
{{imagesPerRow → 3.30137}}
```

(Local) Out[8]=

```
{4}
```

(Local) Out[9]=

```
{{imageSize → {118.5}}}
```

Case of an iPhone SE

(Local) In[10]:=

```
N[imagesPerRowEq /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 320}]  
Ceiling[imagesPerRow /. %]  
N[imageSizeEq /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 320, imagesPerRow → %}]
```

(Local) Out[10]=

```
{{imagesPerRow → 2.20548}}
```

(Local) Out[11]=

```
{3}
```

(Local) Out[12]=

```
{{imageSize → {105.333}}}
```

(Local) In[13]:=

```
N[imagesPerRowEq /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 568}]  
Ceiling[imagesPerRow /. %]  
N[imageSizeEq /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 568, imagesPerRow → %}]
```

(Local) Out[13]=

```
{{imagesPerRow → 3.90411}}
```

(Local) Out[14]=

```
{4}
```

(Local) Out[15]=

```
{{imageSize → {140.5}}}
```

Case of an iPhone X

(Local) In[16]:=	N[imagesPerRowEq /. {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 375}] Ceiling[imagesPerRow /. %] N[imageSizeEq /. {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 375, imagesPerRow → %}]
(Local) Out[16]=	{{imagesPerRow → 2.58219}}
(Local) Out[17]=	{3}
(Local) Out[18]=	{{imageSize → {123.667}}}
(Local) In[19]:=	N[imagesPerRowEq /. {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 812}] Ceiling[imagesPerRow /. %] N[imageSizeEq /. {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 812, imagesPerRow → %}]
(Local) Out[19]=	{{imagesPerRow → 5.57534}}
(Local) Out[20]=	{6}
(Local) Out[21]=	{{imageSize → {133.667}}}

Case of an iPad Pro 9.7-inch

(Local) In[22]:=	N[imagesPerRowEq /. {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 768}] Ceiling[imagesPerRow /. %] N[imageSizeEq /. {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 768, imagesPerRow → %}]
(Local) Out[22]=	{{imagesPerRow → 5.27397}}
(Local) Out[23]=	{6}
(Local) Out[24]=	{{imageSize → {126.333}}}
(Local) In[25]:=	N[imagesPerRowEq /. {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 1024}] Ceiling[imagesPerRow /. %] N[imageSizeEq /. {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 1024, imagesPerRow → %}]
(Local) Out[25]=	{{imagesPerRow → 7.0274}}
(Local) Out[26]=	{8}
(Local) Out[27]=	{{imageSize → {126.25}}}

Case of an iPad Pro 12.9-inch

(Local) In[28]=

```
N[imagesPerRowEq /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 1024}]  
Ceiling[imagesPerRow /. %]  
N[imageSizeEq /. {kCellSpacing → 2,  
  kMarginsSpacing → 0, frameWidth → 1024, imagesPerRow → %}]
```

(Local) Out[28]=

```
{{imagesPerRow → 7.0274}}
```

(Local) Out[29]=

```
{8}
```

(Local) Out[30]=

```
{{imageSize → {126.25}}}
```

(Local) In[31]=

```
N[imagesPerRowEq /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 1366}]  
Ceiling[imagesPerRow /. %]  
N[imageSizeEq /. {kCellSpacing → 2,  
  kMarginsSpacing → 0, frameWidth → 1366, imagesPerRow → %}]
```

(Local) Out[31]=

```
{{imagesPerRow → 9.36986}}
```

(Local) Out[32]=

```
{10}
```

(Local) Out[33]=

```
{{imageSize → {134.8}}}
```

Case of respected aspect ratios

Thumbnails should always be available on server (default size of 144 max x 144 max points). Panoramas will not be displayed in good quality, the width of thumbnails being always limited to 144 points.

Holes being not wished in the collection view, images must be displayed with the same height in each row. To respect aspect ratios, one needs to identify the images of a row before performing any calculation. This means that we need a way to know which image is in which row. A simple solution consists in fixing the same number of images per row.

Number of images per row

(Local) In[34]=

```
imagesPerRowEq2 = Solve[gridWidth[imagesPerRow, 144 * 3 / 4], imagesPerRow]
```

(Local) Out[34]=

```
{{imagesPerRow →  $\frac{\text{frameWidth} + \text{kCellSpacing} - 2 \text{kMarginsSpacing}}{108 + \text{kCellSpacing}}$ }}
```

Dimensions of 3 images in a row

(Local) In[35]:=

```
gridWidthFor3[imageHeight_, aspectRatio1_, aspectRatio2_, aspectRatio3_] :=  
{frameWidth == kMarginsSpacing + (imageHeight aspectRatio1 + kCellSpacing) +  
  (imageHeight aspectRatio2 + kCellSpacing) +  
  imageHeight aspectRatio3 + kMarginsSpacing}
```

(Local) In[36]:=

```
imageHeightFor3Eq = Solve[gridWidthFor3[imageHeight,  
  aspectRatio1, aspectRatio2, aspectRatio3], imageHeight]
```

(Local) Out[36]=

```
{{imageHeight →  $\frac{\text{frameWidth} - 2 \text{kCellSpacing} - 2 \text{kMarginsSpacing}}{\text{aspectRatio1} + \text{aspectRatio2} + \text{aspectRatio3}}$ }}}
```

Dimensions of 4 images in a row

(Local) In[37]:=

```
gridWidthFor4[imageHeight_, aspectRatio1_,  
  aspectRatio2_, aspectRatio3_, aspectRatio4_] :=  
{frameWidth == kMarginsSpacing + (imageHeight aspectRatio1 + kCellSpacing) +  
  (imageHeight aspectRatio2 + kCellSpacing) +  
  (imageHeight aspectRatio3 + kCellSpacing) +  
  imageHeight aspectRatio4 + kMarginsSpacing}
```

(Local) In[38]:=

```
imageHeightFor4Eq = Solve[gridWidthFor4[imageHeight, aspectRatio1,  
  aspectRatio2, aspectRatio3, aspectRatio4], imageHeight]
```

(Local) Out[38]=

```
{{imageHeight →  $\frac{\text{frameWidth} - 3 \text{kCellSpacing} - 2 \text{kMarginsSpacing}}{\text{aspectRatio1} + \text{aspectRatio2} + \text{aspectRatio3} + \text{aspectRatio4}}$ }}}
```

Dimensions of 5 images in a row

(Local) In[39]:=

```
gridWidthFor5[imageHeight_, aspectRatio1_,  
  aspectRatio2_, aspectRatio3_, aspectRatio4_, aspectRatio5_] :=  
{frameWidth == kMarginsSpacing + (imageHeight aspectRatio1 + kCellSpacing) +  
  (imageHeight aspectRatio2 + kCellSpacing) +  
  (imageHeight aspectRatio3 + kCellSpacing) +  
  (imageHeight aspectRatio4 + kCellSpacing) +  
  imageHeight aspectRatio5 + kMarginsSpacing}
```

(Local) In[40]:=

```
imageHeightFor5Eq =  
Solve[gridWidthFor5[imageHeight, aspectRatio1, aspectRatio2,  
  aspectRatio3, aspectRatio4, aspectRatio5], imageHeight]
```

(Local) Out[40]=

```
{{imageHeight →  $\frac{\text{frameWidth} - 4 \text{kCellSpacing} - 2 \text{kMarginsSpacing}}{\text{aspectRatio1} + \text{aspectRatio2} + \text{aspectRatio3} + \text{aspectRatio4} + \text{aspectRatio5}}$ }}}
```

Dimensions of 8 images in a row

(Local) In[41]:=

```
gridWidthFor8[imageHeight_, aspectRatio1_,
  aspectRatio2_, aspectRatio3_, aspectRatio4_, aspectRatio5_,
  aspectRatio6_, aspectRatio7_, aspectRatio8_] :=
{frameWidth = kMarginsSpacing + (imageHeight aspectRatio1 + kCellSpacing) +
  (imageHeight aspectRatio2 + kCellSpacing) +
  (imageHeight aspectRatio3 + kCellSpacing) +
  (imageHeight aspectRatio4 + kCellSpacing) +
  (imageHeight aspectRatio5 + kCellSpacing) +
  (imageHeight aspectRatio6 + kCellSpacing) +
  (imageHeight aspectRatio7 + kCellSpacing) +
  imageHeight aspectRatio8 + kMarginsSpacing}
```

(Local) In[42]:=

```
imageHeightFor8Eq =
Solve[gridWidthFor8[imageHeight, aspectRatio1, aspectRatio2,
  aspectRatio3, aspectRatio4, aspectRatio5, aspectRatio6,
  aspectRatio7, aspectRatio8], imageHeight]
```

(Local) Out[42]=

```
{{{imageHeight → (frameWidth - 7 kCellSpacing - 2 kMarginsSpacing) /
  (aspectRatio1 + aspectRatio2 + aspectRatio3 + aspectRatio4 +
  aspectRatio5 + aspectRatio6 + aspectRatio7 + aspectRatio8)}}}
```

Case of an iPhone 4s

(Local) In[43]:=

```

N[imagesPerRowEq2 /.
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 320}]
Ceiling[imagesPerRow /. %]
N[imageHeightFor3Eq /.
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 320,
   aspectRatio1 → 4 / 3, aspectRatio2 → 4 / 3, aspectRatio3 → 4 / 3}];
{4 / 3 * imageHeight /. %, imageHeight /. %, 4 / 3 * imageHeight /. %,
 imageHeight /. %, 4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor3Eq /. {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth →
  320, aspectRatio1 → 3 / 4, aspectRatio2 → 4 / 3, aspectRatio3 → 4 / 3}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 4 / 3 * imageHeight /. %,
 imageHeight /. %, 4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor3Eq /. {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth →
  320, aspectRatio1 → 3 / 4, aspectRatio2 → 3 / 4, aspectRatio3 → 4 / 3}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 3 / 4 * imageHeight /. %,
 imageHeight /. %, 4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor3Eq /. {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth →
  320, aspectRatio1 → 3 / 4, aspectRatio2 → 3 / 4, aspectRatio3 → 3 / 4}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 3 / 4 * imageHeight /. %,
 imageHeight /. %, 3 / 4 * imageHeight /. %, imageHeight /. %}

```

(Local) Out[43]=

```
{ {imagesPerRow → 2.92727} }
```

(Local) Out[44]=

```
{ 3 }
```

(Local) Out[46]=

```
{ {105.333}, {79.}, {105.333}, {79.}, {105.333}, {79.} }
```

(Local) Out[48]=

```
{ {69.3659}, {92.4878}, {123.317}, {92.4878}, {123.317}, {92.4878} }
```

(Local) Out[50]=

```
{ {83.6471}, {111.529}, {83.6471}, {111.529}, {148.706}, {111.529} }
```

(Local) Out[52]=

```
{ {105.333}, {140.444}, {105.333}, {140.444}, {105.333}, {140.444} }
```

(Local) In[53]:=

```

N[imagesPerRowEq2 /.
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 480}]
Ceiling[imagesPerRow /. %]
N[imageHeightFor5Eq /. {kCellSpacing → 2, kMarginsSpacing → 0,
  frameWidth → 480, aspectRatio1 → 4 / 3, aspectRatio2 → 4 / 3,
  aspectRatio3 → 4 / 3, aspectRatio4 → 4 / 3, aspectRatio5 → 4 / 3}];
{4 / 3 * imageHeight /. %, imageHeight /. %, 4 / 3 * imageHeight /. %,
  imageHeight /. %, 4 / 3 * imageHeight /. %,
  imageHeight /. %, 4 / 3 * imageHeight /. %, imageHeight /. %,
  4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor5Eq /. {kCellSpacing → 2, kMarginsSpacing → 0,
  frameWidth → 480, aspectRatio1 → 3 / 4, aspectRatio2 → 4 / 3,
  aspectRatio3 → 4 / 3, aspectRatio4 → 4 / 3, aspectRatio5 → 4 / 3}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 4 / 3 * imageHeight /. %,
  imageHeight /. %, 4 / 3 * imageHeight /. %,
  imageHeight /. %, 4 / 3 * imageHeight /. %, imageHeight /. %,
  4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor5Eq /. {kCellSpacing → 2, kMarginsSpacing → 0,
  frameWidth → 480, aspectRatio1 → 3 / 4, aspectRatio2 → 3 / 4,
  aspectRatio3 → 4 / 3, aspectRatio4 → 4 / 3, aspectRatio5 → 4 / 3}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 4 / 3 * imageHeight /. %,
  imageHeight /. %, 4 / 3 * imageHeight /. %, imageHeight /. %,
  4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor5Eq /. {kCellSpacing → 2, kMarginsSpacing → 0,
  frameWidth → 480, aspectRatio1 → 3 / 4, aspectRatio2 → 3 / 4,
  aspectRatio3 → 3 / 4, aspectRatio4 → 4 / 3, aspectRatio5 → 4 / 3}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 4 / 3 * imageHeight /. %, imageHeight /. %,
  4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor5Eq /. {kCellSpacing → 2, kMarginsSpacing → 0,
  frameWidth → 480, aspectRatio1 → 3 / 4, aspectRatio2 → 3 / 4,
  aspectRatio3 → 3 / 4, aspectRatio4 → 3 / 4, aspectRatio5 → 4 / 3}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 3 / 4 * imageHeight /. %, imageHeight /. %,
  4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor5Eq /. {kCellSpacing → 2, kMarginsSpacing → 0,
  frameWidth → 480, aspectRatio1 → 3 / 4, aspectRatio2 → 3 / 4,
  aspectRatio3 → 3 / 4, aspectRatio4 → 3 / 4, aspectRatio5 → 3 / 4}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 3 / 4 * imageHeight /. %, imageHeight /. %}

```

(Local) Out[53]=

```
{{imagesPerRow → 4.38182}}
```

(Local) Out[54]=

```
{5}
```

(Local) Out[56]=

```
{{94.4}, {70.8}, {94.4}, {70.8},
{94.4}, {70.8}, {94.4}, {70.8}, {94.4}, {70.8}}
```

(Local) Out[58]=

```
{{58.1918}, {77.589}, {103.452}, {77.589}, {103.452},
{77.589}, {103.452}, {77.589}, {103.452}, {77.589}}
```


(Local) Out[60]=

```
{{64.3636}, {85.8182}, {64.3636}, {85.8182}, {114.424},  
{85.8182}, {114.424}, {85.8182}, {114.424}, {85.8182}}
```

(Local) Out[62]=

```
{{72.}, {96.}, {72.}, {96.}, {72.}, {96.}, {128.}, {96.}, {128.}, {96.}}
```

(Local) Out[64]=

```
{{81.6923}, {108.923}, {81.6923}, {108.923}, {81.6923},  
{108.923}, {81.6923}, {108.923}, {145.231}, {108.923}}
```

(Local) Out[66]=

```
{{94.4}, {125.867}, {94.4}, {125.867}, {94.4},  
{125.867}, {94.4}, {125.867}, {94.4}, {125.867}}
```

Case of an iPhone X

(Local) In[67]:=

```

N[imagesPerRowEq2 /.
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 375}]
Ceiling[imagesPerRow /. %]
N[imageHeightFor4Eq /. {kCellSpacing → 2,
  kMarginsSpacing → 0, frameWidth → 375, aspectRatio1 → 4 / 3,
  aspectRatio2 → 4 / 3, aspectRatio3 → 4 / 3, aspectRatio4 → 4 / 3}];
{4 / 3 * imageHeight /. %, imageHeight /. %, 4 / 3 * imageHeight /. %,
  imageHeight /. %, 4 / 3 * imageHeight /. %, imageHeight /. %,
  4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor4Eq /. {kCellSpacing → 2, kMarginsSpacing → 0,
  frameWidth → 375, aspectRatio1 → 3 / 4, aspectRatio2 → 4 / 3,
  aspectRatio3 → 4 / 3, aspectRatio4 → 4 / 3}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 4 / 3 * imageHeight /. %,
  imageHeight /. %, 4 / 3 * imageHeight /. %, imageHeight /. %,
  4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor4Eq /. {kCellSpacing → 2, kMarginsSpacing → 0,
  frameWidth → 375, aspectRatio1 → 3 / 4, aspectRatio2 → 3 / 4,
  aspectRatio3 → 4 / 3, aspectRatio4 → 4 / 3}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 4 / 3 * imageHeight /. %, imageHeight /. %,
  4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor4Eq /. {kCellSpacing → 2, kMarginsSpacing → 0,
  frameWidth → 375, aspectRatio1 → 3 / 4, aspectRatio2 → 3 / 4,
  aspectRatio3 → 3 / 4, aspectRatio4 → 4 / 3}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 3 / 4 * imageHeight /. %, imageHeight /. %,
  4 / 3 * imageHeight /. %, imageHeight /. %}
N[imageHeightFor4Eq /. {kCellSpacing → 2, kMarginsSpacing → 0,
  frameWidth → 375, aspectRatio1 → 3 / 4, aspectRatio2 → 3 / 4,
  aspectRatio3 → 3 / 4, aspectRatio4 → 3 / 4}];
{3 / 4 * imageHeight /. %, imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 3 / 4 * imageHeight /. %,
  imageHeight /. %, 3 / 4 * imageHeight /. %, imageHeight /. %}

```

(Local) Out[67]=

```
{{ imagesPerRow → 3.42727 }}
```

(Local) Out[68]=

```
{ 4 }
```

(Local) Out[70]=

```
{{ 92.25 }, { 69.1875 }, { 92.25 },
{ 69.1875 }, { 92.25 }, { 69.1875 }, { 92.25 }, { 69.1875 }}
```

(Local) Out[72]=

```
{{ 58.2632 }, { 77.6842 }, { 103.579 }, { 77.6842 },
{ 103.579 }, { 77.6842 }, { 103.579 }, { 77.6842 }}
```

(Local) Out[74]=

```
{{ 66.42 }, { 88.56 }, { 66.42 }, { 88.56 }, { 118.08 }, { 88.56 }, { 118.08 }, { 88.56 }}
```

(Local) Out[76]=

```
{{ 77.2326 }, { 102.977 }, { 77.2326 }, { 102.977 },
{ 77.2326 }, { 102.977 }, { 137.302 }, { 102.977 }}
```

(Local) Out[78]=

```
{{ 92.25 }, { 123. }, { 92.25 }, { 123. }, { 92.25 }, { 123. }, { 92.25 }, { 123. }}
```

(Local) In[79]:=

```
N[imagesPerRowEq2 /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 812}]  
Ceiling[imagesPerRow /. %]
```

(Local) Out[79]=

```
{ { imagesPerRow → 7.4 } }
```

(Local) Out[80]=

```
{ 8 }
```

Case of an iPad Pro 9.7-inch

(Local) In[81]:=

```
N[imagesPerRowEq2 /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 768}]  
Ceiling[imagesPerRow /. %]
```

(Local) Out[81]=

```
{ { imagesPerRow → 7. } }
```

(Local) Out[82]=

```
{ 7 }
```

(Local) In[83]:=

```
N[imagesPerRowEq2 /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 1024}]  
Ceiling[imagesPerRow /. %]
```

(Local) Out[83]=

```
{ { imagesPerRow → 9.32727 } }
```

(Local) Out[84]=

```
{ 10 }
```

Case of an iPad Pro 12.9-inch

(Local) In[85]:=

```
N[imagesPerRowEq2 /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 1024}]  
Ceiling[imagesPerRow /. %]
```

(Local) Out[85]=

```
{ { imagesPerRow → 9.32727 } }
```

(Local) Out[86]=

```
{ 10 }
```

(Local) In[87]:=

```
N[imagesPerRowEq2 /.  
  {kCellSpacing → 2, kMarginsSpacing → 0, frameWidth → 1366}]  
Ceiling[imagesPerRow /. %]
```

(Local) Out[87]=

```
{ { imagesPerRow → 12.4364 } }
```

(Local) Out[88]=

```
{ 13 }
```