Rovnice a vzorce na více řádků

$$(a+b)^2 = a^2+2ab+b^2 \qquad (1)$$
$$\sin^2\eta+\cos^2\eta = 1$$

```
\begin{equation} (a+b)^2 = a^2+2ab+b^2
\end{equation}
\[  \sin^2\eta+\cos^2\eta = 1  \]
```

```
\usepackage[leqno]{amsmath}
```

Prostředí gather

$$
\begin{gathered}
x_1 x_2 + x_1^2 x_2^2 + x_3, \\
x_1 x_3 + x_1^2 x_3^2 + x_2, \\
x_1 x_2 x_3.
\end{gathered} \tag{2}
$$

```
\begin{gather}
   x_{1} x_{2} + x_{1}^{2} x_{2}^{2} + x_{3},\notag\\
   x_{1} x_{3} + x_{1}^{2} x_{3}^{2} + x_{2},\\
   x_{1} x_{2} x_{3}. \nonumber
\end{gather}
```

Pravidla pro prostředí `gather`

- ★ Řádky jsou odděleny pomocí `\\`. Nepište `\\` na konec posledního řádku.
- ★ Každý řádek je číslován (pokud nepoužijete `\tag` nebo `\notag` před `\\`).
- ★ Uvnitř prostředí nejsou povoleny prázdné řádky!

Prostředí `multline`

$$\begin{multline}
(x_1x_2x_3x_4x_5x_6)^2+\\
(x_1x_2x_3x_4x_5 + x_1x_3x_4x_5x_6 + x_1x_2x_4x_5x_6 + x_1x_2x_3x_5x_6)^2+\\
(x_1x_2x_3x_4 + x_1x_2x_3x_5 + x_1x_2x_4x_5 + x_1x_3x_4x_5 + x_2x_3x_4x_5)^2 \quad (3)
\end{multline}$$

```
\begin{multline}
   (x_{1} x_{2} x_{3} x_{4} x_{5} x_{6})^{2} +\\
   (x_{1} x_{2} x_{3} x_{4} x_{5} + x_{1} x_{3} x_{4}
    x_{5} x_{6} + x_{1} x_{2} x_{4} x_{5} x_{6}
    + x_{1} x_{2} x_{3} x_{5} x_{6})^{2}+\\
   (x_{1} x_{2} x_{3} x_{4} + x_{1} x_{2} x_{3} x_{5} +
    x_{1} x_{2} x_{4} x_{5} + x_{1} x_{3} x_{4} x_{5} +
    x_{2} x_{3} x_{4} x_{5})^{2}
\end{multline}
```

First line of a multline
Centered Middle line
A right Middle
Another centered Middle
Yet another centered Middle
A left Middle
Last line of the multline (4)

```
\begin{multline}
 \text{First line of a multline}    \\
 \text{Centered Middle line}        \\
 \shoveright{\text{A right Middle}} \\
 \text{Another centered Middle}     \\
 \text{Yet another centered Middle} \\
 \shoveleft{\text{A left Middle}}   \\
 \text{Last line of the multline}
\end{multline}
```

$$\sum_{t\in\mathbf{T}} \int_a^t \biggl\{ \int_a^t f(t-x)^2\, g(y)^2 \,\dx \biggr\} \,\dy \\ = \sum_{t\notin\mathbf{T}} \int_t^a \biggl\{ g(y)^2 \int_t^a f(x)^2 \,\dx \biggr\} \,\dy \quad (5)$$

```
\begin{multline}
  \sum_{t \in \mathbf{T}} \int_a^t
    \biggl\lbrace \int_a^t f(t - x)^2 \,
            g(y)^2 \,\dx \biggr\rbrace \,\dy \\
  = \sum_{t \notin \mathbf{T}} \int_t^a
      \biggl\lbrace g(y)^2 \int_t^a
        f(x)^2 \,\dx \biggr\rbrace \,\dy
\end{multline}
```

$$\sum_{t\in\mathbf{T}} \int_a^t \biggl\{ \int_a^t f(t-x)^2\, g(y)^2 \,\dx \biggr\} \,\dy \\ = \sum_{t\notin\mathbf{T}} \int_t^a \biggl\{ g(y)^2 \int_t^a f(x)^2 \,\dx \biggr\} \,\dy \quad (6)$$

```
\setlength\multlinegap{0pt}
\begin{multline}
  \sum_{t \in \mathbf{T}} \int_a^t
    \biggl\lbrace \int_a^t f(t - x)^2 \,
            g(y)^2 \,\dx \biggr\rbrace \,\dy \\
  = \sum_{t \notin \mathbf{T}} \int_t^a
      \biggl\lbrace g(y)^2 \int_t^a
        f(x)^2 \,\dx \biggr\rbrace \,\dy
\end{multline}
```

Pravidla pro prostředí `multline`

- ★ Řádky jsou odděleny pomocí `\\`. Nepište `\\` na konec posledního řádku.
- ★ Formule je číslována jako celek (pokud nejsou řádky označeny pomocí `\tag` nebo číslování potlačeno příkazem `\notag`).
- ★ Uvnitř prostředí nejsou povoleny prázdné řádky!

Prostředí `align`

$$x = y + z, \tag{7}$$
$$u = v + w. \tag{8}$$

```
\begin{align}
   x &= y + z,\\
   u &= v + w.
\end{align}
```

$$
\begin{aligned}
h(x) &= \int \left(\frac{f(x) + g(x)}{1 + f^2(x)} + \frac{1 + f(x)g(x)}{\sqrt{1 - \sin x}} \right) \mathrm{d}x \qquad (9)\\
&= \int \frac{1 + f(x)}{1 + g(x)} \mathrm{d}x - 2 \tan^{-1}(x - 2)
\end{aligned}
$$

```
\begin{align}
   h(x) &= \int \left( \frac{f(x) + g(x)}{1 + f^{2}(x)}+
             \frac{ 1 + f(x)g(x) }{ \sqrt{1 - \sin x} }
             \right)\,\dx\\
        &= \int \frac{ 1 + f(x) }{ 1 + g(x) }\,\dx
         -2 \tan^{-1}(x - 2) \notag
\end{align}
```

$$
\begin{aligned}
x &= x \wedge (y \vee z) && \text{(by distributivity)} \\
&= (x \wedge y) \vee (x \wedge z) && \text{(by condition (M))} \\
&= y \vee z.
\end{aligned} \tag{10}
$$

```
\begin{align}
x &= x \ wedge (y \vee z)            & &\text{(by distributivity)}\\
  &= (x \wedge y) \vee (x \wedge z)  & &\text{(by condition (M))} \notag\\
  &= y \vee z.                       & &\notag
\end{align}
```

$$\begin{aligned} f(x) &= x + yz & g(x) &= x + y + z \\ h(x) &= xy + xz + yz & k(x) &= (x + y)(x + z)(y + z) \end{aligned} \tag{11}$$

```
\begin{align}
   f(x) &= x + yz          & g(x) &= x + y + z\\
   h(x) &= xy + xz + yz    & k(x) &= (x + y)(x + z)(y + z)
    \notag
\end{align}
```

$$\begin{aligned} f(x) &= x + yz & g(x) &= x + y + z \\ h(x) &= xy + xz + yz & k(x) &= (x + y)(x + z)(y + z) \end{aligned} \tag{12}$$

```
\begin{flalign}
   f(x) &= x + yz        & g(x) &= x + y + z\\
   h(x) &= xy + xz + yz & k(x) &= (x + y)(x + z)(y + z)
    \notag
\end{flalign}
```

$$x = 17y \tag{13}$$
$$y > a + b + c \tag{14}$$

$$x = 17y \tag{15}$$
$$y > a + b + c \tag{16}$$

```
\begin{eqnarray}
   x & = & 17y \\
   y & > & a + b + c
\end{eqnarray}

\begin{align}
   x  &=  17y \\
   y  &>  a + b + c
\end{align}
```

$$x_1 + y_1 + \left(\sum_{i<5} \binom{5}{i} + a^2 \right)^2 \\ \left(\sum_{i<5} \binom{5}{i} + \alpha^2 \right)^2$$

```
\begin{align}
 x_{1} + y_{1} + \left( \sum_{i < 5} \binom{5}{i}
             &+ a^{2} \right)^{2}\\
 \left( \sum_{i < 5} \binom{5}{i} &+ \alpha^{2} \right)^{2}
\end{align}
```

$$x_1 + y_1 + \left(\sum_{i<5} \binom{5}{i} + a^2 \right)^2 \\ \left(\sum_{i<5} \binom{5}{i} + \alpha^2 \right)^2$$

$$x_1 + y_1 + \left(\sum_{i<5} \binom{5}{i} + a^2 \right)^2 \left(\sum_{i<5} \binom{5}{i} + \alpha^2 \right)^2$$

```
\begin{align*}
   x_{1} + y_{1} + &\left( \sum_{i < 5}
    \binom{5}{i} + a^{2} \right)^{2}\\
      &\left( \sum_{i < 5} \binom{5}{i} +
       \alpha^{2} \right)^{2}
\end{align*}
```

$$x_1 + y_1 + \left(\sum_{i<5} \binom{5}{i} + a^2 \right)^2 \left(\sum_{i<5} \binom{5}{i} + \alpha^2 \right)^2$$

```
\begin{align*}
   &x_{1} + y_{1} + \left( \sum_{i < 5}
    \binom{5}{i} + a^{2} \right)^{2}\\
   &\phantom{x_{1} + y_{1} + {}}
      \left( \sum_{i < 5} \binom{5}{i}
       + \alpha^{2} \right)^{2}
\end{align*}
```

Pravidla pro dělení vzorců na „podvýrazy“

- ★ Každý z podvýrazů musíme být schopni vysázet samostatně.
- ★ Pokud podvýraz začíná binárním operátorem + nebo −, sázíme tento pomocí `{}+`, `{}-`.
- ★ Pokud podvýraz končí binárním operátorem + nebo −, sázíme tento pomocí `+{}`, `-{}`.

Prostředí alignat

$$\begin{aligned} f(x) &= x + yz & g(x) &= x + y + z \\ h(x) &= xy + xz + yz & k(x) &= (x + y)(x + z)(y + z) \end{aligned} \tag{17}$$

```
\begin{alignat}{2}
   f(x) &= x + yz        & g(x) &= x + y + z\\
   h(x) &= xy + xz + yz & k(x) &= (x + y)(x + z)(y + z)
    \notag
\end{alignat}
```

$$\begin{aligned} f(x) &= x + yz & g(x) &= x + y + z \\ h(x) &= xy + xz + yz & k(x) &= (x + y)(x + z)(y + z) \end{aligned} \tag{18}$$

```
\begin{alignat}{2}
   f(x) &= x + yz        & \qquad g(x) &= x +  y + z\\
   h(x) &= xy + xz + yz & \qquad k(x) &= (x + y)(x + z)
                                          (y + z)\notag
\end{alignat}
```

$$
\begin{aligned}
x &= x \wedge (y \vee z) && \text{by distributivity,} \\
&= (x \wedge y) \vee (x \wedge z) && \text{by Condition (M),} \\
&= y \vee z
\end{aligned}
\tag{19}
$$

```
\begin{alignat}{2}
   x &= x \wedge (y \vee z) & &\quad\text{by
                                  distributivity,}\\
     &= (x \wedge y) \vee (x \wedge z)
                             & &\quad\text{by
                                      Condition (M),}
                                           \notag\\
     &= y \vee z \notag
\end{alignat}
```

$$(A + BC)x + \qquad Cy = 0, \tag{20}$$
$$Ex + (F + G)y = 23. \tag{21}$$

```
\begin{alignat}{2}
   (A + B C)x &+{} & C      y &= 0,\\
           Ex &+{} & (F + G)y &= 23.
\end{alignat}
```

Prostředí aligned, gathered a alignedat

$$\begin{aligned} x &= 3, \\ y &= 4, \\ z &= 5; \end{aligned} \quad \text{or} \quad \begin{aligned} x &= 5, \\ y &= 12, \\ z &= 13. \end{aligned}$$

```
\[
   \begin{aligned}
      x &= 3,\\
      y &= 4,\\
      z &= 5;
   \end{aligned}
   \text{\qquad or \qquad}
   \begin{aligned}
      x &= 5,\\
      y &= 12,\\
      z &= 13.
   \end{aligned}
\]
```

$$\begin{aligned}[b] x &= 3,\\ y &= 4,\\ z &= 5; \end{aligned} \text{ or } \begin{aligned}[b] x &= 5,\\ y &= 12,\\ z &= 13. \end{aligned}$$

```
\[
   \begin{aligned}[b]
      x &= 3,\\
      y &= 4,\\
      z &= 5;
   \end{aligned}
   \text{\qquad or \qquad}
   \begin{aligned}[b]
      x &= 5,\\
      y &= 12,\\
      z &= 13.
   \end{aligned}
\]
```

$$
\begin{aligned}
x &= 3 + \mathbf{p} + \alpha \\
y &= 4 + \mathbf{q} \\
z &= 5 + \mathbf{r} \\
u &= 6 + \mathbf{s}
\end{aligned}
\quad \text{using} \quad
\begin{gathered}
\mathbf{p} = 5 + a + \alpha \\
\mathbf{q} = 12 \\
\mathbf{r} = 13 \\
\mathbf{s} = 11 + d
\end{gathered}
$$

```
\[
   \begin{aligned}
      x &= 3 + \mathbf{p} + \alpha \\
      y &= 4 + \mathbf{q}\\
      z &= 5 + \mathbf{r} \\
      u &=6 + \mathbf{s}
   \end{aligned}
   \text{\qquad using\qquad}
   \begin{gathered}
      \mathbf{p} = 5 + a + \alpha \\
      \mathbf{q} = 12 \\
      \mathbf{r} = 13 \\
      \mathbf{s} = 11 + d
   \end{gathered}
\]
```

$$
\begin{aligned}
h(x) &= \int \left(\frac{f(x) + g(x)}{1+ f^{2}(x)} + \frac{1+ f(x)g(x) }{\sqrt{1 - \sin x}} \right)\,\dx\\
&= \int \frac{ 1 + f(x) }{ 1 + g(x) } \,\dx - 2 \tan^{-1} (x-2)
\end{aligned}
\tag{22}
$$

```
\begin{equation}
   \begin{aligned}
      h(x) &= \int \left( \frac{f(x) + g(x)}{1+ f^{2}(x)} +
      \frac{1+ f(x)g(x) }{\sqrt{1 - \sin x}} \right)\,\dx\\
           &= \int \frac{ 1 + f(x) }{ 1 + g(x) }
                        \,\dx - 2 \tan^{-1} (x-2)
   \end{aligned}
\end{equation}
```

Prostředí split

$$
\begin{aligned}
f &= (x_1 x_2 x_3 x_4 x_5 x_6)^2 \\
&= (x_1 x_2 x_3 x_4 x_5 + x_1 x_3 x_4 x_5 x_6 + x_1 x_2 x_4 x_5 x_6 + x_1 x_2 x_3 x_5 x_6)^2 \qquad (23) \\
&= (x_1 x_2 x_3 x_4 + x_1 x_2 x_3 x_5 + x_1 x_2 x_4 x_5 + x_1 x_3 x_4 x_5 + x_2 x_3 x_4 x_5)^2
\end{aligned}
$$

```
\begin{equation}
   \begin{split}
      f &= (x_{1} x_{2} x_{3} x_{4} x_{5} x_{6})^{2}\\
        &= (x_{1} x_{2} x_{3} x_{4} x_{5} +
         x_{1} x_{3} x_{4} x_{5} x_{6} +
         x_{1} x_{2} x_{4} x_{5} x_{6} +
         x_{1} x_{2} x_{3} x_{5} x_{6})^{2}\\
        &= (x_{1} x_{2} x_{3} x_{4} + x_{1} x_{2} x_{3}
            x_{5} + x_{1} x_{2} x_{4} x_{5} + x_{1} x_{3}
            x_{4} x_{5} +  x_{2} x_{3} x_{4} x_{5})^{2}
   \end{split}
\end{equation}
```

$$
\begin{aligned}
f &= (x_1 x_2 x_3 x_4 x_5 x_6)^2 \\
&= (x_1 x_2 x_3 x_4 x_5 + x_1 x_3 x_4 x_5 x_6 + x_1 x_2 x_4 x_5 x_6 + x_1 x_2 x_3 x_5 x_6)^2 \qquad (24) \\
&= (x_1 x_2 x_3 x_4 + x_1 x_2 x_3 x_5 + x_1 x_2 x_4 x_5 + x_1 x_3 x_4 x_5 + x_2 x_3 x_4 x_5)^2, \\
g &= y_1 y_2 y_3. \qquad (25)
\end{aligned}
$$

```
\begin{align}
   \begin{split}
      f &= (x_{1} x_{2} x_{3} x_{4} x_{5} x_{6})^{2}\\
        &= (x_{1} x_{2} x_{3} x_{4} x_{5} +
          x_{1} x_{3} x_{4} x_{5} x_{6} +
          x_{1} x_{2} x_{4} x_{5} x_{6} +
          x_{1} x_{2} x_{3} x_{5} x_{6})^{2}\\
        &= (x_{1} x_{2} x_{3} x_{4} +
          x_{1} x_{2} x_{3} x_{5} +
          x_{1} x_{2} x_{4} x_{5} +
          x_{1} x_{3} x_{4} x_{5} +
          x_{2} x_{3} x_{4} x_{5})^{2},
   \end{split}\\
      g &= y_{1} y_{2} y_{3}.
\end{align}
```

Pokud při načítání balíku amsmath použijeme volbu `tbtags`, bude se číslo formule umísťovat na poslední (resp. první) řádek podle toho, jestli číslujeme rovnice na levé (resp. pravé) straně. Implicitní volba je `centertags`, která umísťuje číslo centrovaně vzhledem k výšce konstrukce (za předpokladu, že je tam dostatek místa).

Pravidla pro prostředí `split`

- ★ Prostředí `split` musí být použito uvnitř jiného matematického prostředí, jako `displaymath`, `equation`, `align`, `gather`, `flalign` a jejich variant s hvězdičkou.
- ★ Příkazy `\label`, `\tag` nebo `\notag` musí být před `\begin{split}` nebo za `\end{split}`.
- ★ Formule vytvořená pomocí `split` má jen jedno číslo (automaticky generované) nebo značku (vytvořenou příkazem `\tag`). Pro zrušení číslování použijte `\notag`.

Příkaz \intertext

$$h(x) = \int \left(\frac{f(x) + g(x)}{1 + f^2(x)} + \frac{1 + f(x)g(x)}{\sqrt{1 - \sin x}} \right) \mathrm{d}x \tag{26}$$

The reader may find the following form easier to read:

$$= \int \frac{1 + f(x)}{1 + g(x)} \mathrm{d}x - 2 \tan^{-1}(x - 2)$$

```
\begin{align}
      h(x) &= \int \left(\frac{f(x) + g(x)}{1 + f^{2}(x)} +
       \frac{1 + f(x)g(x)}{\sqrt{1 - \sin x}}\right)\,\dx\\
   \intertext{The reader may find the following
              form easier to read:}
      &= \int \frac{1 + f(x)}{1 + g(x)}\,\dx  -
       2 \tan^{-1}(x - 2) \notag
\end{align}
```

$$f(x) = x + yz \qquad\qquad g(x) = x + y + z$$

The reader also may find the following polynomials useful:

$$h(x) = xy + xz + yz \qquad k(x) = (x + y)(x + z)(y + z)$$

```
\begin{alignat*}{2}
   f(x) &= x + yz & \qquad g(x) &= x + y + z \\
   \intertext{The reader also may find the following
    polynomials useful:}
   h(x) &= xy + xz + yz
                  & \qquad k(x) &= (x + y)(x + z)(y + z)
\end{alignat*}
```

Větvení

$$f(x) = \begin{cases} -x^2, & \text{if } x \leq 0; \\ 0 + x, & \text{if } 0 \leq x \leq 1; \\ x^2, & \text{otherwise.} \end{cases} \tag{27}$$

```
\begin{equation}
   f(x) =
      \begin{cases}
         -x^{2}, &\text{if $x \leq 0$;}\\
         0 + x,  &\text{if $ 0 \leq x \leq 1$;}\\
         x^{2},  &\text{otherwise.}
      \end{cases}
\end{equation}
```

$$a = b + c, \tag{28}$$
$$d = e + f, \tag{29}$$
$$x = y + z, \tag{30}$$
$$u = v + w.$$

```
{\allowdisplaybreaks
\begin{align}
   a &= b + c,\\
   d &= e + f,\\
   x &= y + z,\\
   u &= v + w.\notag
\end{align}
}
```

Matice

$$\begin{matrix} a + b + c & uv & x - y & 27 \\ a + b & u + v & z & 134 \end{matrix}$$

```
\begin{equation*}
   \begin{matrix}
      a + b + c & uv & x - y & 27\\
      a  + b & u + v & z & 134
   \end{matrix}
\end{equation*}
```

$$\begin{matrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 \\ 1 & 2 & 3 & \hdots & & & & & & & 11 & 12 \end{matrix} \tag{31}$$

```
\begin{equation}
   \setcounter{MaxMatrixCols}{12}
   \begin{matrix}
      1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12\\
      1 & 2 & 3 & \hdotsfor{7} & 11 & 12
   \end{matrix}
\end{equation}
```

$\begin{smallmatrix} a+b+c & uv \\ a+b & c+d \end{smallmatrix}$

```
\(
   \begin{smallmatrix}
      a + b + c & uv\\
      a + b & c + d
   \end{smallmatrix}
\)
```

$$\begin{matrix} 0 & 1 \\ 1 & 0 \end{matrix} \quad \begin{pmatrix} 0 & -i \\ i & 0 \end{pmatrix}$$

$$\begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix} \quad \begin{Bmatrix} 1 & 0 \\ 0 & -1 \end{Bmatrix}$$

$$\begin{vmatrix} a & b \\ c & d \end{vmatrix} \quad \begin{Vmatrix} i & 0 \\ 0 & -i \end{Vmatrix}$$

```
\begin{gather*}
  \begin{matrix}  0 &  1 \\ 1 &  0
   \end{matrix}  \quad
  \begin{pmatrix} 0 & -i \\ i &  0
   \end{pmatrix} \\
  \begin{bmatrix} 0 & -1 \\ 1 &  0
   \end{bmatrix} \quad
  \begin{Bmatrix} 1 &  0 \\ 0 & -1
   \end{Bmatrix} \\
  \begin{vmatrix} a &  b \\ c &  d
   \end{vmatrix} \quad
  \begin{Vmatrix} i &  0 \\ 0 & -i
   \end{Vmatrix}
\end{gather*}
```

$$\left(\begin{array}{ccr|ccc} 3 & -4 & 5 & 1 & 0 & 0 \\ 2 & -3 & 1 & 0 & 1 & 0 \\ 3 & -5 & -1 & 0 & 0 & 1 \end{array}\right)$$

```
\[
\left(
\begin{array}{@{}ccr|ccc@{}}
3 & -4 &  5 & 1 & 0 & 0\\
2 & -3 &  1 & 0 & 1 & 0\\
3 & -5 & -1 & 0 & 0 & 1
\end{array}
\right)
\]
```

Víceřádkové indexy a exponenty

$$\sum_{\substack{0\le i\le m\\ 0<j<n}} P(i,j) \tag{32}$$

$$\sum_{\substack{i\in\Lambda\\ 0\le i\le m\\ 0<j<n}} P(i,j) \tag{33}$$

```
\begin{gather}
\sum_{\substack{0 \le i \le m \\ 0 < j < n}}
                    P(i, j) \\
\sum_{\begin{subarray}{l} i \in \Lambda  \\
                          0 \le i \le m \\
                          0 < j < n
      \end{subarray}}  P(i, j)
\end{gather}
```

Rámečky

Makro **\boxed** může být použito v textovém $\boxed{a+b=c}$ i v display matematickém módu:

$$\boxed{f(x)=\int_1^{\infty}\frac{1}{x^2}\,\mathrm{d}x=1} \tag{34}$$

```
\fboxsep =5pt
\begin{equation}
\boxed{f(x)=\int_1^{\infty}\frac{1}{x^2}\,
\dx=1}
\end{equation}
```

Balíček empheq

$$f(x)=\int_1^{\infty}\frac{1}{x^2}\,\mathrm{d}x=1 \tag{35}$$

$$f(x)=\int_2^{\infty}\frac{1}{x^2}\,\mathrm{d}x=0{,}25 \tag{36}$$

```
\begin{empheq}[box={\fboxsep=10pt
        \colorbox{cyan}}]{align}
f(x) &=\int_1^{\infty}\frac{1}{x^2}\,\dx=1\\
f(x) &=\int_2^{\infty}\frac{1}{x^2}\,\dx=0{,}25
\end{empheq}
```