$$x_1x_2 + x_1^2x_2^2 + x_3, \tag{1}$$
$$x_1x_3 + x_1^2x_3^2 + x_2, \tag{2}$$
$$x_1x_2x_3. \tag{3}$$

```
\begin{gather}
   x_{1} x_{2} + x_{1}^{2} x_{2}^{2} + x_{3}, \label{E:mm1.1}\\
   x_{1} x_{3} + x_{1}^{2} x_{3}^{2} + x_{2}, \label{E:mm1.2}\\
   x_{1} x_{2} x_{3}. \label{E:mm1.3}
\end{gather}
```

$$\begin{multline}(x_1x_2x_3x_4x_5x_6)^2\\ + (y_1y_2y_3y_4y_5 + y_1y_3y_4y_5y_6 + y_1y_2y_4y_5y_6 + y_1y_2y_3y_5y_6)^2\\ + (z_1z_2z_3z_4z_5 + z_1z_3z_4z_5z_6 + z_1z_2z_4z_5z_6 + z_1z_2z_3z_5z_6)^2\\ + (u_1u_2u_3u_4 + u_1u_2u_3u_5 + u_1u_2u_4u_5 + u_1u_3u_4u_5)^2 \tag{4}\end{multline}$$

```
\begin{multline}\label{E:mm2}
   (x_{1} x_{2} x_{3} x_{4} x_{5} x_{6})^{2}\\
   + (y_{1} y_{2} y_{3} y_{4} y_{5} +y_{1} y_{3} y_{4} y_{5} y_{6}
   + y_{1} y_{2} y_{4} y_{5} y_{6}
   + y_{1} y_{2} y_{3} y_{5} y_{6})^{2}\\
   + (z_{1} z_{2} z_{3} z_{4} z_{5} +z_{1} z_{3} z_{4} z_{5} z_{6}
   + z_{1} z_{2} z_{4} z_{5} z_{6}
   + z_{1} z_{2} z_{3} z_{5} z_{6})^{2}\\
   + (u_{1} u_{2} u_{3} u_{4} + u_{1} u_{2} u_{3} u_{5} +
   u_{1} u_{2} u_{4} u_{5} + u_{1} u_{3} u_{4} u_{5})^{2}
\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})^{2}
\end{multline*}
\begin{setlength}{\multlinegap}{0pt}
   \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})^{2}
   \end{multline*}
\end{setlength}
```

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

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

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

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

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

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

$$\begin{aligned} r^2 &= s^2+t^2, && (5)\\ 2u + 1 &= v + w^{\alpha}, && (6)\\ x &= \frac{y+z}{\sqrt{s+2u}}; && (7) \end{aligned}$$

```
\begin{align}
r^2    &= s^2+t^2, \\
2u + 1 &= v + w^{\alpha}, \\
     x &= \frac{y+z}{\sqrt{s+2u}};
\end{align}
```

$$\begin{aligned} x &= x \wedge (y \vee z) && \text{(by distributivity)} && (8)\\ &= (x \wedge y) \vee (x \wedge z) && \text{(by condition (M))}\\ &= y \vee z. \end{aligned}$$

```
\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}
```

$$\begin{aligned} f(x) &= x + yz & g(x) &= x + y + z && (9)\\ h(x) &= xy + xz + yz & k(x) &= (x + y)(x + z)(y + z) \end{aligned}$$

```
\begin{align}\label{E:mm3}
   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}
```

$$
\begin{aligned}
&f(x) = x + yz && g(x) = x + y + z \qquad (10)\\
&h(x) = xy + xz + yz && k(x) = (x + y)(x + z)(y + z)
\end{aligned}
$$

```
\begin{flalign}\label{E:mm3fl}
   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}
```

$$x \quad = \quad 17y \qquad (11)$$

$$y \quad > \quad a + b + c \qquad (12)$$

$$x = 17y \qquad (13)$$

$$y > a + b + c \qquad (14)$$

```
\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}
```

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

$$\begin{aligned} f(x) &= x + yz \qquad g(x) = x + y + z \qquad (15) \\ h(x) &= xy + xz + yzk(x) = (x + y)(x + z)(y + z) \end{aligned}$$

```
\begin{alignat}{2}\label{E:mm3A}
   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}
```

$$\begin{aligned} f(x) &= x + yz & g(x) &= x + y + z \qquad (16) \\ h(x) &= xy + xz + yz & k(x) &= (x + y)(x + z)(y + z) \end{aligned}$$

```
\begin{alignat}{2}\label{E:mm3B}
   f(x) &= x + yz               & g(x) &= x + y + z\\
   h(x) &= xy + xz + yz \qquad & k(x) &= (x + y)(x + z)(y + z)
    \notag
\end{alignat}
```

$$\begin{aligned} x &= x \wedge (y \vee z) & &\quad\text{(by distributivity)} \qquad (17) \\ &= (x \wedge y) \vee (x \wedge z) & &\quad\text{(by condition (M))} \\ &= y \vee z \end{aligned}$$

```
\begin{alignat}{2}\label{E:mm4}
   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}
```

$$
\begin{alignat}{2}
(A + B C)x &+{} &C &y = 0, \tag{18}\\
Ex &+{} &(F + G)&y = 23. \tag{19}
\end{alignat}
$$

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

$$
h(x) = \int \left(\frac{f(x) + g(x)}{1 + f^{2}(x)} + \frac{1 + f(x)g(x)}{\sqrt{1 - \sin x}} \right) \, dx \tag{20}
$$

The reader may find the following form easier to read:

$$
= \int \frac{1 + f(x)}{1 + g(x)} \, dx - 2 \arctan(x - 2)
$$

```
\begin{align}\label{E:mm5}
      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 \arctan(x - 2) \notag
\end{align}
```

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

The reader also may find the following polynomials useful:

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

```
\begin{align*}
   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{align*}
```

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

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

$$
\begin{aligned}
h(x) &= \int \left(\frac{f(x)+g(x)}{1+f^{2}(x)} + \frac{1+f(x)g(x)}{\sqrt{1-\sin x}} \right) \, dx \\
&= \int \frac{1+f(x)}{1+g(x)} \, dx - 2\arctan(x-2)
\end{aligned} \tag{21}
$$

```
\begin{equation}\label{E:mm6}
   \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 \arctan (x - 2)
   \end{aligned}
\end{equation}
```

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

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

$$
\begin{equation}
\begin{split}
(x_1x_2&x_3x_4x_5x_6)^2\\
&+ (x_1x_2x_3x_4x_5 + x_1x_3x_4x_5x_6 + x_1x_2x_4x_5x_6 + x_1x_2x_3x_5x_6)^2
\end{split}
\tag{22}
\end{equation}
$$

```
\begin{equation}\label{E:mm7}
   \begin{split}
       (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}
   \end{split}
\end{equation}
```

$$
\begin{align}
\begin{split}
f &= (x_1x_2x_3x_4x_5x_6)^2\\
&= (x_1x_2x_3x_4x_5 + x_1x_3x_4x_5x_6 + x_1x_2x_4x_5x_6 + x_1x_2x_3x_5x_6)^2,
\end{split} \tag{23}\\
g &= y_1y_2y_3. \tag{24}
\end{align}
$$

```
\begin{align}\label{E:mm8}
   \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},
   \end{split}\\
      g &= y_{1} y_{2} y_{3}.\label{E:mm9}
\end{align}
```

$$
\begin{gathered}
\begin{split}
f &= (x_{1} x_{2} x_{3} x_{4} x_{5} x_{6})^{2}\\
&= (x_{1} x_{2} x_{3} x_{4} x_{5} + x_{1} x_{3} x_{4} x_{5} x_{6} + x_{1} x_{2} x_{4} x_{5} x_{6} + x_{1} x_{2} x_{3} x_{5} x_{6})^{2}\\
&= (x_{1} x_{2} x_{3} x_{4} + x_{1} x_{2} x_{3} x_{5} + x_{1} x_{2} x_{4} x_{5} + x_{1} x_{3} x_{4} x_{5})^{2}
\end{split} \qquad (25)\\
g = y_{1} y_{2} y_{3} \qquad (26)\\
h = z_{1}^{2} z_{2}^{2} z_{3}^{2} z_{4}^{2} \qquad (27)
\end{gathered}
$$

```
\begin{gather}\label{E:mm10}
   \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})^{2}
   \end{split}\\
   \begin{align}
      g &= y_{1} y_{2} y_{3}\\
      h &= z_{1}^{2} z_{2}^{2} z_{3}^{2} z_{4}^{2}
   \end{align}
\end{gather}
```

$$\left(\begin{matrix} a+b+c & uv & x-y & 27\\ a+b & u+v & z & 1340 \end{matrix}\right)$$

```
\begin{equation*}
   \left(
      \begin{matrix}
         a + b + c & uv & x - y & 27\\
         a + b & u + v & z & 1340
      \end{matrix}
   \right)
\end{equation*}
```

$$\left(\begin{matrix} a+b+c & uv & x-y & 27\\ a+b & u+v & z & 1340 \end{matrix}\right) = \left(\begin{matrix} 1 & 100 & 115 & 27\\ 201 & 0 & 1 & 1340 \end{matrix}\right)$$

```
\begin{equation*}
   \left(
   \begin{matrix}
      a + b + c & uv    & x - y & 27  \\
      a + b     & u + v & z     & 1340
   \end{matrix}
   \right) =
   \left(
   \begin{matrix}
      1   & 100 & 115 & 27  \\
      201 & 0   & 1   & 1340
   \end{matrix}
   \right)
\end{equation*}
```

$$\begin{matrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12\\ 1 & 2 & 3 & \hdotsfor{7} & 11 & 12 \end{matrix} \tag{28}$$

```
\begin{equation}\label{E:mm12}
   \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}
```

$$\begin{matrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12\\ 1 & 2 & 3 & \hdotsfor[3]{7} & 11 & 12 \end{matrix} \tag{29}$$

```
\begin{equation}\label{E:mm12dupl}
   \setcounter{MaxMatrixCols}{12}
   \begin{matrix}
      1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12\\
      1 & 2 & 3 & \hdotsfor[3]{7}            & 11 & 12
   \end{matrix}
\end{equation}
```

$$\begin{alignedat}{3} &\begin{matrix} a+b+c & uv\\ a+b & c+d \end{matrix} \qquad && \begin{pmatrix} a+b+c & uv\\ a+b & c+d \end{pmatrix} \qquad && \begin{bmatrix} a+b+c & uv\\ a+b & c+d \end{bmatrix}\\ &\begin{vmatrix} a+b+c & uv\\ a+b & c+d \end{vmatrix} \qquad && \begin{Vmatrix} a+b+c & uv\\ a+b & c+d \end{Vmatrix} \qquad && \begin{Bmatrix} a+b+c & uv\\ a+b & c+d \end{Bmatrix} \end{alignedat}$$

```
\begin{alignat*}{3}
   &\
   \begin{matrix}
      a + b + c & uv\\
      a + b & c + d
   \end{matrix}
   \qquad
   & &
   \begin{pmatrix}
      a + b + c & uv\\
      a + b & c + d
   \end{pmatrix}
   \qquad
   & &
   \begin{bmatrix}
      a + b + c & uv\\
      a + b & c + d
   \end{bmatrix}
   \\
   &
   \begin{vmatrix}
      a + b + c & uv\\
      a + b & c + d
   \end{vmatrix}
   \qquad
```

```
   & &
   \begin{Vmatrix}
      a + b + c & uv\\
      a + b & c + d
   \end{Vmatrix}
   \qquad
   & &
   \begin{Bmatrix}
      a + b + c & uv\\
      a + b & c + d
   \end{Bmatrix}
\end{alignat*}

\begin{equation*}
   \left(
   \begin{matrix}
      1      &    0   & \dots   & 0      \\
      0      &    1   & \dots   & 0      \\
      \vdots & \vdots & \ddots  & \vdots\\
      0      &    0   & \dots   & 1
   \end{matrix}
   \right]
\end{equation*}
```

$$\left(\begin{matrix} 1 & 0 & \dots & 0 \\ 0 & 1 & \dots & 0 \\ \vdots & \vdots & \ddots & \vdots \\ 0 & 0 & \dots & 1 \end{matrix}\right]$$

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

$\left(\begin{smallmatrix} a+b+c & uv \\ a+b & c+d \end{smallmatrix}\right)$

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

$$\left(\begin{array}{cccc} a+b+c & uv & x-y & 27 \\ a+b & u+v & z & 134 \end{array}\right)$$

```
\begin{equation*}
   \left(
   \begin{array}{cccc}
      a + b + c & uv    & x - y & 27 \\
      a + b     & u + v & z     & 134
   \end{array}
   \right)
\end{equation*}
```

$$\left(\begin{array}{cccc} a+b+c & uv & x-y & 27 \\ a+b & u+v & z & 1340 \end{array}\right) = \left(\begin{array}{rrrr} 1 & 100 & 115 & 27 \\ 201 & 0 & 1 & 1340 \end{array}\right)$$

```
\begin{equation*}
   \left(
      \begin{array}{cccr}
         a + b + c & uv & x - y & 27\\
         a + b & u + v & z & 1340
      \end{array}
   \right) =
   \left(
      \begin{array}{rrrr}
         1 & 100 & 115 & 27\\
         201 & 0 & 1 & 1340
      \end{array}
   \right)
\end{equation*}
```

$$f(x) = \begin{cases} -x^{2}, & \text{if } x < 0; \\ \alpha + x, & \text{if } 0 \leq x \leq 1; \\ x^{2}, & \text{otherwise.} \end{cases} \tag{30}$$

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

$$a = b + c, \tag{31}$$

$$d = e + f, \tag{32}$$
$$x = y + z, \tag{33}$$
$$u = v + w. \tag{34}$$

```
{\allowdisplaybreaks
\begin{align}\label{E:mm13}
   a &= b + c,\\
   d &= e + f,\\
   x &= y + z,\\
   u &= v + w.
\end{align}
}% end of \allowdisplaybreaks
```

$$x_1x_2 + x_1^2x_2^2 + x_3, \tag{35}$$
$$x_1x_3 + x_1^2x_3^2 + x_2, \tag{35a}$$
$$x_1x_2x_3; \tag{35b}$$

```
\begin{gather}
   x_{1} x_{2} + x_{1}^{2} x_{2}^{2} + x_{3},\label{E:mm1}      \\
   x_{1} x_{3} + x_{1}^{2} x_{3}^{2} + x_{2},\tag{\ref{E:mm1}a}\\
   x_{1} x_{2} x_{3};\tag{\ref{E:mm1}b}
\end{gather}
```

$$x_1x_2 + x_1^2x_2^2 + x_3, \tag{36a}$$
$$x_1x_3 + x_1^2x_3^2 + x_2, \tag{36b}$$
$$x_1x_2x_3, \tag{36c}$$

```
\begin{subequations}\label{E:gp}
   \begin{gather}
      x_{1} x_{2} + x_{1}^{2} x_{2}^{2} + x_{3},\label{E:gp1}\\
      x_{1} x_{3} + x_{1}^{2} x_{3}^{2} + x_{2},\label{E:gp2}\\
      x_{1} x_{2} x_{3},\label{E:gp3}
   \end{gather}
\end{subequations}
```

$$\begin{CD}
A @>>> B \\
@VVV @VVV \\
C @= D
\end{CD}$$

```
\[
   \begin{CD}
      A        @>>>       B    \\
      @VVV                @VVV\\
      C        @=         D
   \end{CD}
\]
```

$$\begin{CD}
\mathbb{C} @>H_{1}>> \mathbb{C} @>H_{2}>> \mathbb{C} \\
@VP_{c,3}VV @VP_{\bar{c},3}VV @VVP_{-c,3}V \\
\mathbb{C} @>H_{1}>> \mathbb{C} @>H_{2}>> \mathbb{C}
\end{CD}$$

```
\[
   \begin{CD}
      \mathbb{C} @>H_{1}>> \mathbb{C} @>H_{2}>> \mathbb{C}  \\
      @VP_{c,3}VV  @VP_{\bar{c},3}VV  @VVP_{-c,3}V  \\
      \mathbb{C} @>H_{1}>> \mathbb{C} @>H_{2}>> \mathbb{C}
   \end{CD}
\]
```

$$\begin{CD}
A @>\log>> B @>>\text{bottom}> C @= D @<<< E @<<< F \\
@V\text{one-one}VV @. @AA\text{onto}A @| \\
X @= Y @>>> Z @>>> U \\
@A\beta AA @AA\gamma A @VVV @VVV \\
D @>\alpha>> E @>>> H @. I
\end{CD}$$

```
\[
   \begin{CD}
      A        @>\log>>      B        @>>\text{bottom}>      C
               @=            D        @<<<                   E
               @<<<          F\\
      @V\text{one-one}VV     @.       @AA\text{onto}A        @|\\
      X        @=            Y        @>>>                   Z
```

```
            @>>>         U\\
    @A\beta AA           @AA\gamma A      @VVV          @VVV\\
    D       @>\alpha>>   E       @>>>                   H
            @.           I\\
  \end{CD}
\]
```