

```

NMaximize[
  {2000 xn + 3000 xk, {xn + 2 xk ≤ 10, 2 xn + 2 xk ≤ 12, 2 xn ≤ 8, xn ≥ 0, xk ≥ 0}}, {xn, xk}]
{16 000., {xn → 2., xk → 4.}}

p1 = ContourPlot[2000 xn + 3000 xk, {xn, 0, 10}, {xk, 0, 10},
  ContourShading → None, FrameLabel → Automatic, ContourLabels → True];
p2 = ContourPlot[2000 xn + 3000 xk == 16 000, {xn, 0, 10},
  {xk, 0, 10}, ContourStyle → {Green, Thick}];
p3 = ContourPlot[{xn + 2 xk == 10, 2 xn + 2 xk == 12, 2 xn == 8},
  {xn, 0, 10}, {xk, 0, 10}, ContourStyle → {Red, Blue, Purple}];
Show[
  p1,
  p2,
  p3]

```

