

LAMPIRAN 1

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> Tahap I
>
> restart;
> with(simplex):
> pembatas:={x1+x2+d1>=10,2*x1+3*x2<=30,6*x1+4*x2<=60};
      pembatas := {10 ≤ x1 + x2 + d1, 2 x1 + 3 x2 ≤ 30, 6 x1 + 4 x2 ≤ 60}
> z:=d1;
      z := d1
> dispaly(pembatas);
      dispaly({10 ≤ x1 + x2 + d1, 2 x1 + 3 x2 ≤ 30, 6 x1 + 4 x2 ≤ 60})
> minimize(z,pembatas, NONNEGATIVE);
      {x2 = 0, d1 = 0, x1 = 10}

> Tahap II
>
> restart;
> with(simplex):
> pembatas:={x1+x2>=10,x2+d2>=7,2*x1+3*x2<=30,6*x1+4*x2<=60};
      pembatas := {10 ≤ x1 + x2, 7 ≤ x2 + d2, 2 x1 + 3 x2 ≤ 30, 6 x1 + 4 x2 ≤ 60}
> z:=d2;
      z := d2
> dispaly(pembatas);
      dispaly({10 ≤ x1 + x2, 7 ≤ x2 + d2, 2 x1 + 3 x2 ≤ 30, 6 x1 + 4 x2 ≤ 60})
> minimize(z,pembatas, NONNEGATIVE);
      {d2 = 0, x1 = 3, x2 = 7}

> Tahap III
>
> restart;
> with(simplex):
> pembatas:={x1+x2>=10,x2>=7,x1+d3>=8,2*x1+3*x2<=30,6*x1+4*x2<=60}
      pembatas := {10 ≤ x1 + x2, 7 ≤ x2, 8 ≤ x1 + d3, 2 x1 + 3 x2 ≤ 30, 6 x1 + 4 x2 ≤ 60}
> z:=d3;
      z := d3
> dispaly(pembatas);
      dispaly({10 ≤ x1 + x2, 7 ≤ x2, 8 ≤ x1 + d3, 2 x1 + 3 x2 ≤ 30, 6 x1 + 4 x2 ≤ 60})
> minimize(z,pembatas, NONNEGATIVE);

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$$\{x2 = 7, d3 = \frac{7}{2}, x1 = \frac{9}{2}\}$$

LAMPIRAN 2

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> Tahap I
>
> restart;
> with(simplex):
> pembatas:={x1+x2<=1000,x1-x2+d11-d12=50};
      pembatas := {x1 + x2 ≤ 1000, x1 - x2 + d11 - d12 = 50}
> z:=d11+d12;
      z := d11 + d12
> dispaly(pembatas);
      dispaly({x1 + x2 ≤ 1000, x1 - x2 + d11 - d12 = 50})
> minimize(z,pembatas, NONNEGATIVE);
      {d12 = 0, x1 = 50, d11 = 0, x2 = 0}
>
> Tahap II
>
> restart;
> with(simplex):
> pembatas:={x1+x2<=1000,x1-x2=50,-2*x1+3*x2+d21-d22=0};
      pembatas := {x1 + x2 ≤ 1000, x1 - x2 = 50, -2*x1 + 3*x2 + d21 - d22 = 0}
> z:=d21+d22;
      z := d21 + d22
> dispaly(pembatas);
      dispaly({x1 + x2 ≤ 1000, x1 - x2 = 50, -2*x1 + 3*x2 + d21 - d22 = 0})
>
> minimize(z,pembatas, NONNEGATIVE);
      {d21 = 0, d22 = 0, x2 = 100, x1 = 150}

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LAMPIRAN 3

Tahap I

```

restart;
with(simplex):
pembatas:={x2<=2,x3<=3,x2+d1>=5};
pembatas := {x2 ≤ 2, x3 ≤ 3, 5 ≤ x2 + d1}
z:=d1;
z := d1
disply(pembatas);
disply({x2 ≤ 2, x3 ≤ 3, 5 ≤ x2 + d1})
minimize(z,pembatas, NONNEGATIVE);
{x3 = 0, x2 = 2, d1 = 3}

```

Tahap II

```

restart;
with(simplex):
pembatas:={x2<=2,x3<=3,x2>=2,-x1-x2+d2>=4};
pembatas := {x2 ≤ 2, x3 ≤ 3, 2 ≤ x2, 4 ≤ -x1 - x2 + d2}
z:=d2;
z := d2
disply(pembatas);
disply({x2 ≤ 2, x3 ≤ 3, 2 ≤ x2, 4 ≤ -x1 - x2 + d2})
minimize(z,pembatas, NONNEGATIVE);
{x3 = 0, x2 = 2, x1 = 0, d2 = 6}

```

Tahap III

```

restart;
with(simplex):
pembatas:={x2<=2,x3<=3,x2>=2,-x1-x2>=-4,x3+d3>=3};
pembatas := {x2 ≤ 2, x3 ≤ 3, 2 ≤ x2, -4 ≤ -x1 - x2, 3 ≤ x3 + d3}
z:=d3;
z := d3
disply(pembatas);
disply({x2 ≤ 2, x3 ≤ 3, 2 ≤ x2, -4 ≤ -x1 - x2, 3 ≤ x3 + d3})
minimize(z,pembatas, NONNEGATIVE);
{x1 = 0, d3 = 0, x2 = 2, x3 = 3}

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