



Optimal Use of Capital

<i>K</i>	<i>TP</i>	<i>MP</i>	<i>MRP</i>
<i>0</i>	<i>0</i>		
<i>1</i>	<i>15</i>	<i>15</i>	<i>150</i>
<i>2</i>	<i>28</i>	<i>13</i>	<i>130</i>
<i>3</i>	<i>40</i>	<i>12</i>	<i>120</i>
<i>4</i>	<i>51</i>	<i>11</i>	<i>110</i>
<i>5</i>	<i>61</i>	<i>10</i>	<i>100</i>
<i>6</i>	<i>70</i>	<i>9</i>	<i>90</i>
<i>7</i>	<i>78</i>	<i>8</i>	<i>80</i>
<i>8</i>	<i>85</i>	<i>7</i>	<i>70</i>

Rule: If  $MRP_K > P_K$

Increase use of capital

>  $P_K = 1000$ : Buy more  $K$

PK

=

1000

$\forall P_K \equiv 1000 :: \text{Buy more } K$

$\gamma_{P_K} = 100\% :: \text{Buy more } K$



$\equiv P_K \equiv 1000 :: \text{Stop buying}$

$\forall P_K \equiv 1000 :: \text{Buy more } K$

We know the firm has  
purchased the optimum  
number of *machines* when  
the  **$MRP_K = P_K$**

$$\angle P_K = 1000: \text{by lies } K$$

$\angle P_K = 100^\circ$  by **less K**

Rule: If  $MRP_K < P_K$ ,  
decrease use of capital

$$\angle P_K = 100^\circ \text{ by lies } K$$





# Optimal use of Capital

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0	0		
1	15	15	150
2	28	13	130
3	40	12	120
4	51	11	110
5	61	10	100
6	70	9	90
7	78	8	80
8	85	7	70

Rule: If  $MRP_K > P_K$

**Increase** use of capital

Rule: If  $MRP_K < P_K$ ,

**decrease** use of capital

We know the firm has  
purchased the optimum  
number of *machines* when  
the  **$MRP_K = P_K$**

**100 =  $P_K$  = 100** Stop buying

We know the firm has purchased  
the optimum number of machines  
if  $MRP_K = P_K$