



Hire all workers for whom the

$MRP_L > \text{price of labor } (P_L)$

6	692	980	1200	1384	1550	1692
5	632	896	1096	1264	1410	1550
4	564	800	960	1128	1264	1384
3	490	692	846	980	1096	1200
2	400	564	692	800	896	980
1	282	400	490	564	632	692
	1	2	3	4	5	6



Capital  
Partners

Labor (L)

L

Total  
Product



692



2

980

3

1200

4

1384

5

1550



6

1692

0

0



Fix Capital at 6

If we use machines

These are all **output** levels that  
can be produced with **6 machines**

[illegible]



288

220

184

166

142

MPL

692

# Marginal Product L



692 - 0

9880 - 692

12000 - 980

1384 - 1200

1550 - 1384

1692 - 1550

$MP_L$

692

288

220

184

166

142

How many **workers** should be hired?





MRP<sub>L</sub>





S

U

































U





U











5



U







6





























6



**b**







W











S















Hire all workers for whom the

$$MRP_L > \$1,000$$



Output with

1 worker

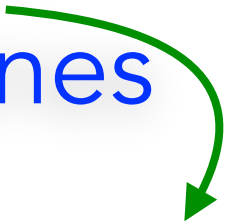
6 machines



Output with

2 workers

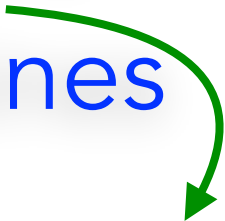
6 machines



Output with

3 workers

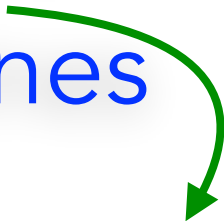
6 machines



Output with

4 workers

6 machines





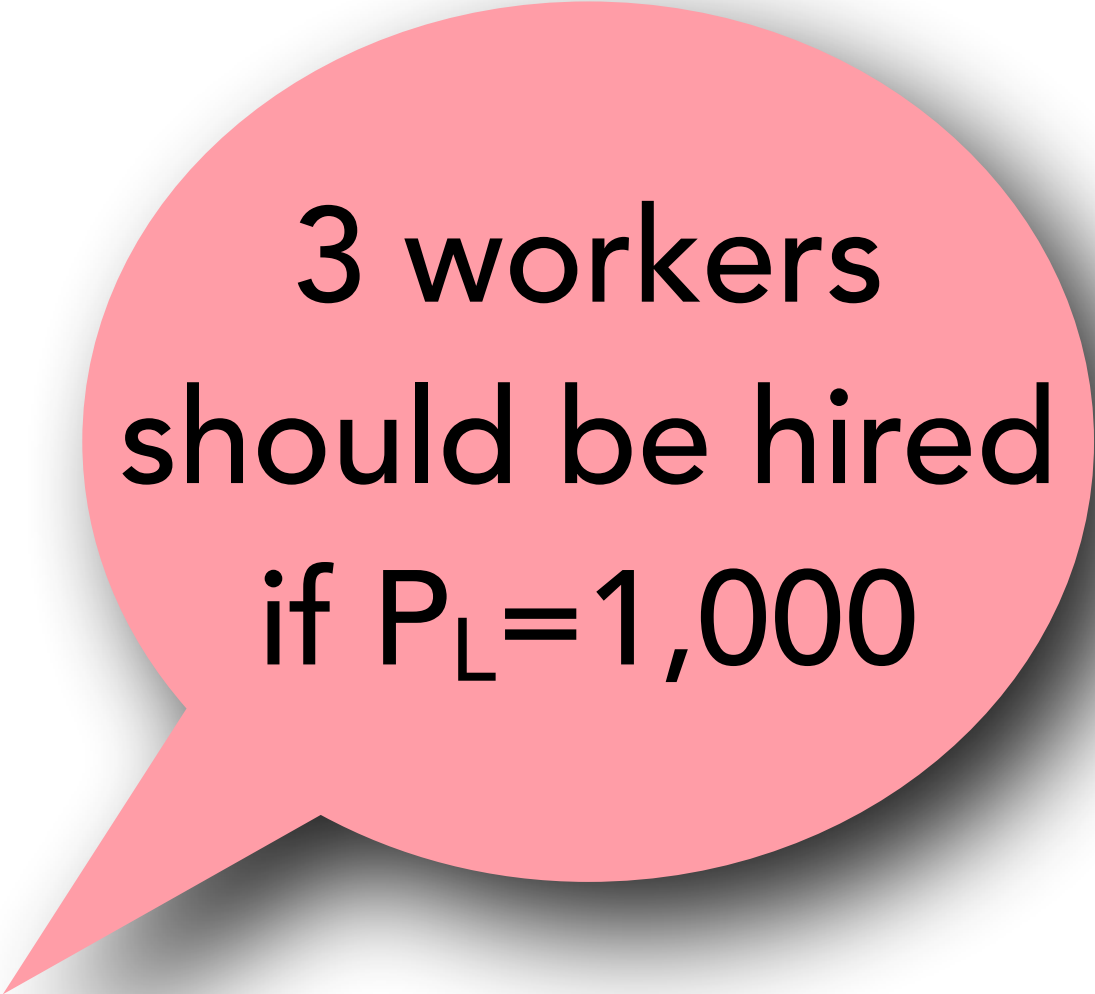
**M**



R

P

**L**

A pink speech bubble with a white drop shadow, containing text.

3 workers  
should be hired  
if  $P_L = 1,000$



M

P

























U





U



Assume the price of Output is \$5/unit  
and the price of Labor (Wage) is \$1,000








692 x 5

$692 \times 5$

288 x 5

$$692 \times 5$$

$$288 \times 5$$

220 x 5

$$692 \times 5$$

$$288 \times 5$$

$$220 \times 5$$



184 x 5

$$692 \times 5$$

$$288 \times 5$$

$$220 \times 5$$

$$184 \times 5$$

166 x 5

$$692 \times 5$$

$$288 \times 5$$

$$220 \times 5$$

$$184 \times 5$$

$$166 \times 5$$

142 x 5

$$692 \times 5$$

$$288 \times 5$$

$$220 \times 5$$

$$184 \times 5$$

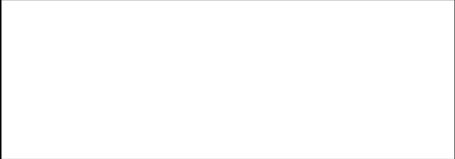
$$166 \times 5$$

$$142 \times 5$$

MRPL







$$= MP_L \times \text{Price of output}$$


3460

3460

1440

3460
1440

1100



3460
1440
1100

920

3460
1440
1100
920

830

3460
1440
1100
920
830

710

3460
1440
1100
920
830
710









>1,000

Hire worker 1

> 1,000

Hire worker 1

>1,000

Hire worker 2

> 1,000

Hire worker 1

> 1,000

Hire worker 2

>1,000

Hire worker 3

> 1,000

Hire worker 1

> 1,000

Hire worker 2

> 1,000

Hire worker 3



<1,000

Do not hire

> 1,000	Hire worker 1
> 1,000	Hire worker 2
> 1,000	Hire worker 3
< 1,000	Do not hire

<1,000

Do not hire

> 1,000	Hire worker 1
> 1,000	Hire worker 2
> 1,000	Hire worker 3
< 1,000	Do not hire
< 1,000	Do not hire

<1,000

Do not hire

>1,000	Hire worker 1
>1,000	Hire worker 2
>1,000	Hire worker 3
<1,000	Do not hire
<1,000	Do not hire
<1,000	Do not hire

If we use 6 machines



Fix Capital at 6

Output with  
4 workers  
6 machines

6	692	980	1200	1384	1550	1692
These are all output levels that can be produced with 6 machines						
	1	2	3	4	5	6

Capital (K)

Labor (L)

Assume the price of Output is \$5/unit  
and the price of Labor (Wage) is \$1,000  
How many workers should be hired?

3 workers  
should be hired  
if  $P_L = 1,000$

$MRP_L = MP_L \times \text{Price of output}$

L	Q	$MP_L$	$MRP_L$	Decision
0	0	0	0	
1	692	692	3460	>1,000 Hire worker 1
2	980	488	2440	>1,000 Hire worker 2
3	1200	220	1100	>1,000 Hire worker 3
4	1384	184	920	<1,000 Do not hire
5	1550	166	830	<1,000 Do not hire
6	1692	142	710	<1,000 Do not hire

Hire all workers for whom the  
 $MRP_L > \text{price of labor } (P_L)$   
Hire all workers for whom the  
 $MRP_L > \$1,000$

L	$MP_L$	$MRP_L$	$MRP_L$
0			
1	692	$692 \times 5$	3460
2	288	$288 \times 5$	1440
3	220	$220 \times 5$	1100
4	184	$184 \times 5$	920
5	166	$166 \times 5$	830
6	142	$142 \times 5$	710