

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
ital

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_L





S

U



























U





U









5



U





6



























6

b







W























Hire all workers for whom the

$$MRP_L > \$1,000$$

Output with

1 worker

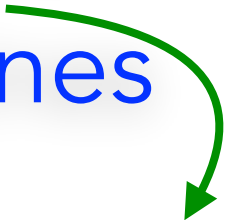
6 machines



Output with

2 workers

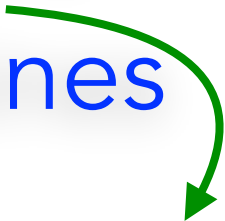
6 machines



Output with

3 workers

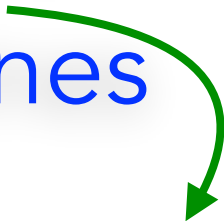
6 machines



Output with

4 workers

6 machines



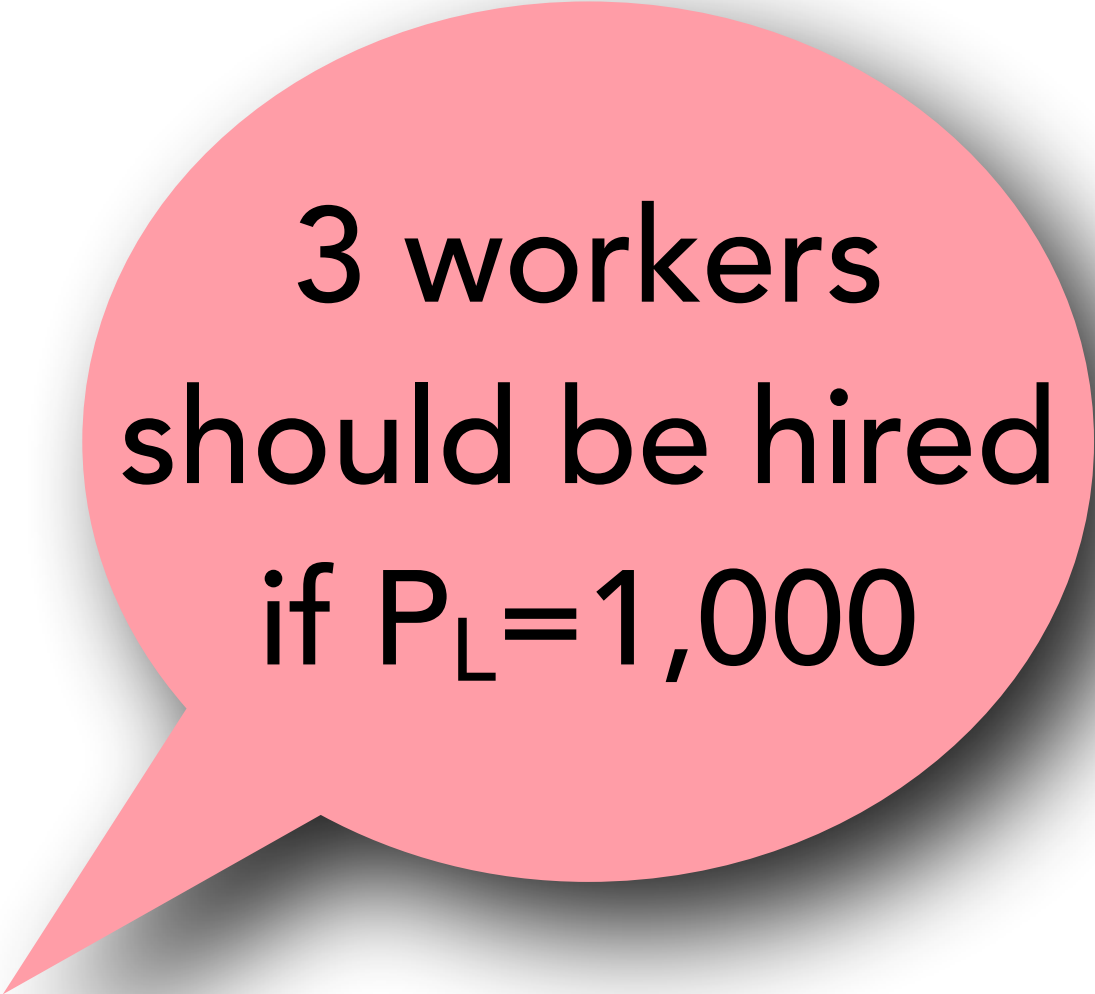


M

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

692×5

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

$$692 \times 5$$

$$288 \times 5$$

$$220 \times 5$$

$$184 \times 5$$

$$166 \times 5$$

$$142 \times 5$$

$$692 \times 5$$

$$288 \times 5$$

$$220 \times 5$$

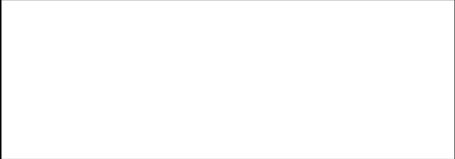
$$184 \times 5$$

$$166 \times 5$$

$$142 \times 5$$

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	692			
1	980	288	1440	>1,000 Hire worker 1
2	1200	220	1100	>1,000 Hire worker 2
3	1384	184	920	<1,000 Do not hire
4	1550	166	830	<1,000 Do not hire
5	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	692×5	3460
2	288	288×5	1440
3	220	220×5	1100
4	184	184×5	920
5	166	166×5	830
6	142	142×5	710