



-1

-2

*

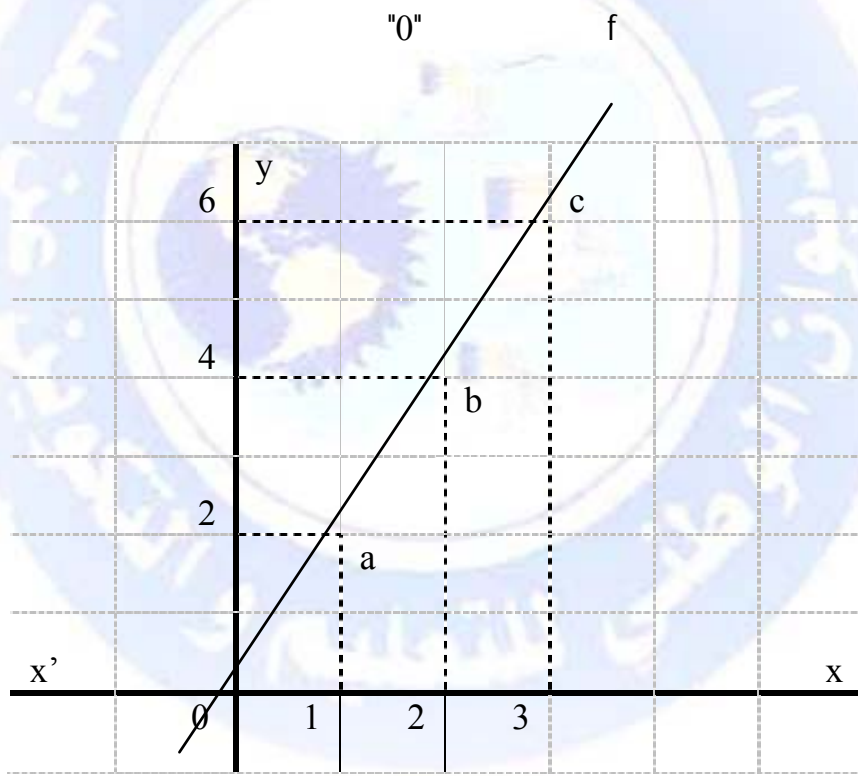
-

-

-1

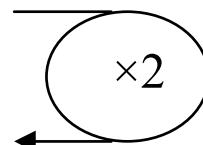
: 1

(d)



:

x	1	2	3
x	2	4	6



. 2 x x

-1

6 4 2

3 2 1

$$2 = \frac{6}{3} = \frac{4}{2} = \frac{2}{1} :$$

2 x

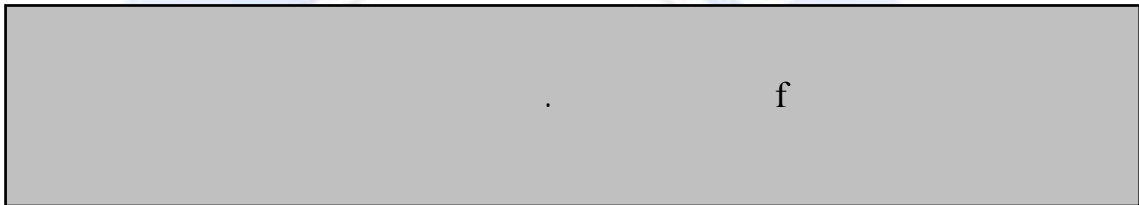
f

f: x → a x : f

a = 2 :

f: x → 2 x :

: _____



f

: 2 -

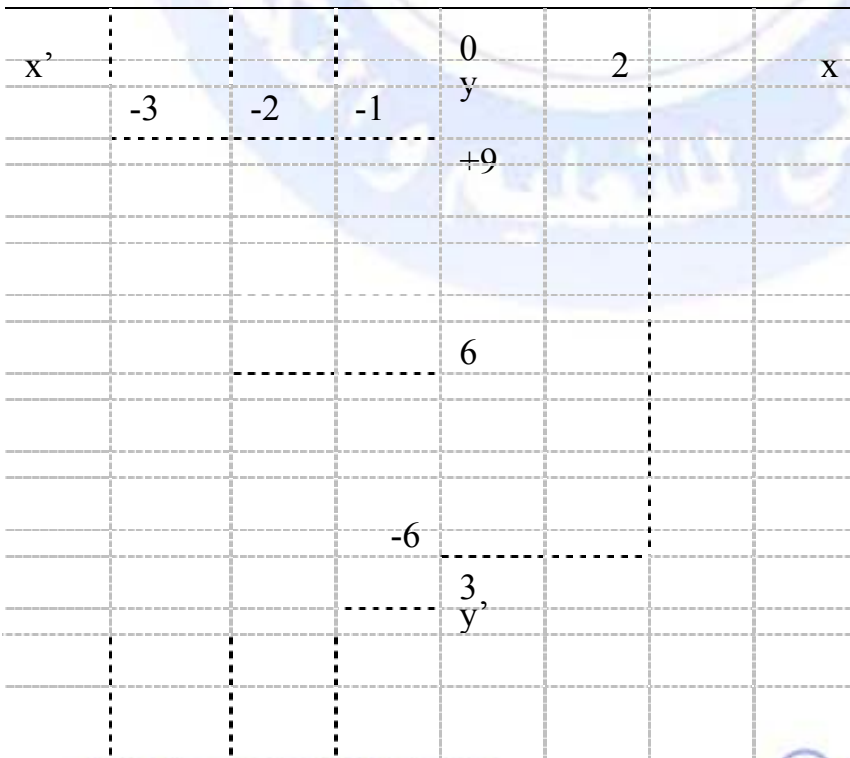
g

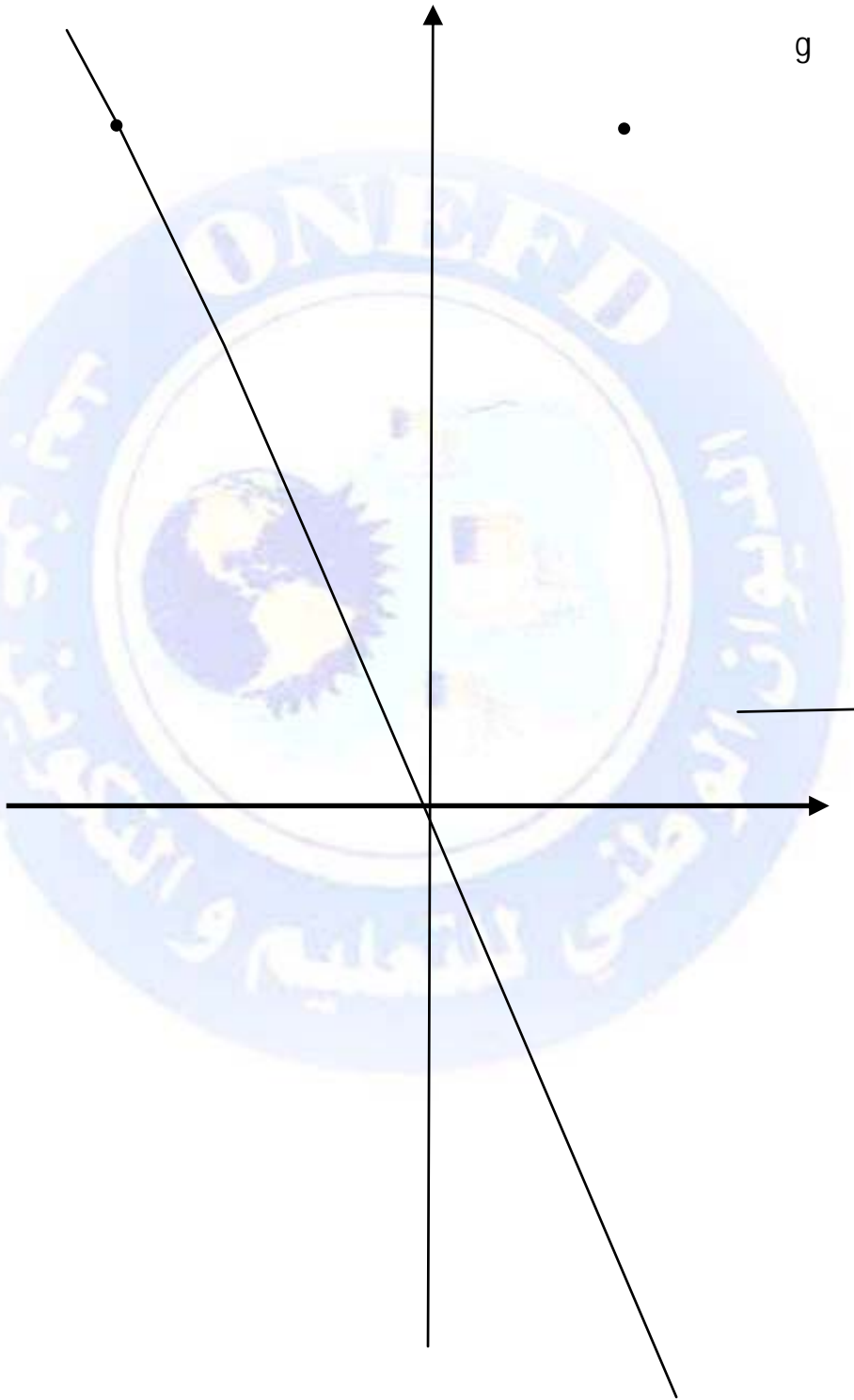
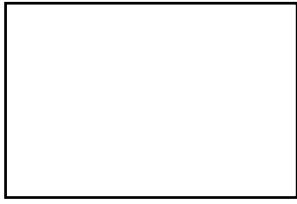
g

-1

.g

-2



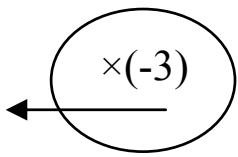


: —

:g

-1

x	-3	-1	2	-2
g(x)	+9	+3	-6	6



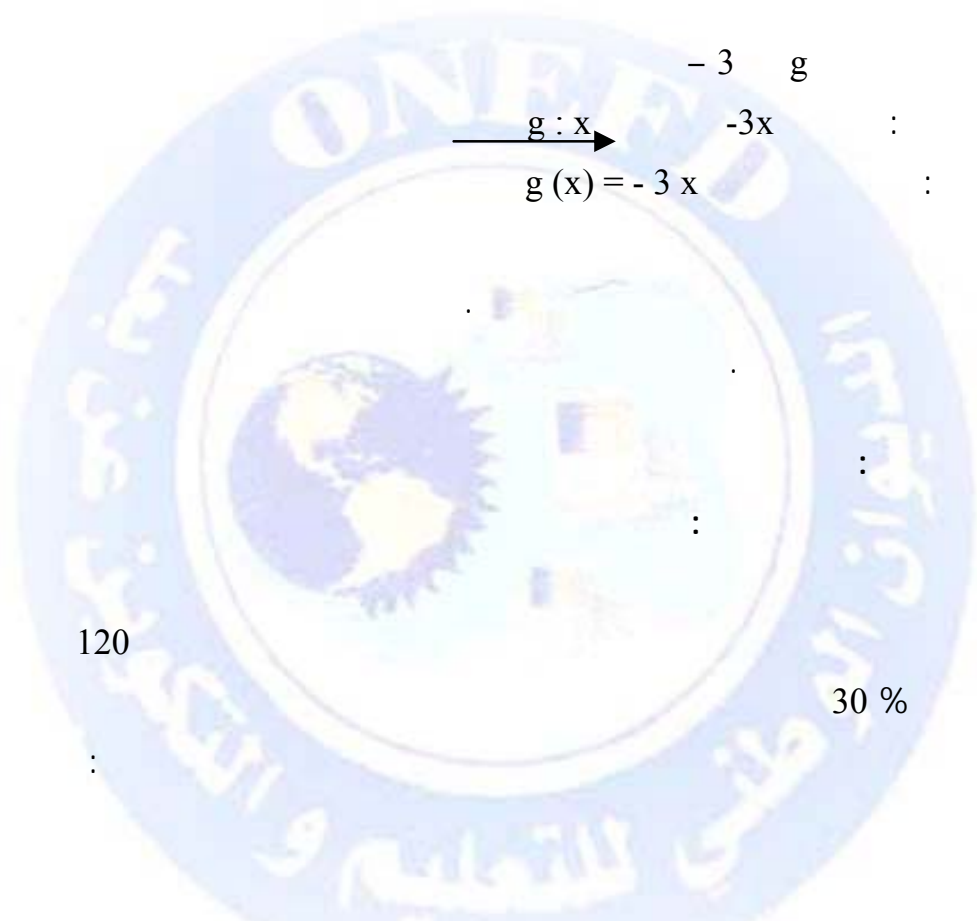
-2

-3 g

g : x →

-3x

$$g(x) = -3x$$



: -2

:

- 1/2

:

120

30 %

	100	120
	30	x

$$x = 120 \times \frac{30}{100} \quad x = 36$$

36

http://

: -2/2

:
x

	$\frac{x \cdot 5\%}{0,05 \cdot x}$	$\frac{x}{1,05 \cdot x}$	$\frac{x}{0,95 \cdot x}$
— —	$\frac{5}{100}x = 0,05x$	$\frac{5}{100}x = \left(1 + \frac{5}{100}\right)x = 1,05x$	$x - \frac{5}{100}x = \left(1 - \frac{5}{100}\right)x = 0,95x$
— —	$X \xrightarrow{(0,05)} 1,05 X$	$X \xrightarrow{(1,05)} 1,05 X$	$X \xrightarrow{(0,95)} 0,95 X$

: 1

$$P\% \quad x \quad -$$

$$\left(1 + \frac{P}{100}\right)x$$

:

80

2006

36

. %

:

$$\left(1 + \frac{P}{100}\right)x :$$

: X

$$: \frac{P}{100}$$

$$\left(1 + \frac{80}{100}\right) \times 36 = (1 + 0,8) \times 36$$

$$= 1,8 \times 36 = 64,8$$

64,8

: 2

$\left(1 - \frac{P}{100}\right) x$	P %	x	-
			:

750

. 20%

$$\left(1 - \frac{P}{100}\right) x :$$

: X

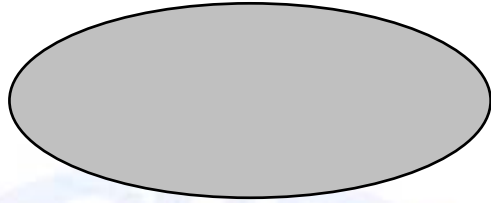
$$: \frac{P}{100}$$

$$\left(1 - \frac{20}{100}\right) \times 750 = (1 - 0.2) \times 750$$

$$= 0.8 \times 750$$

$$= 600$$

600



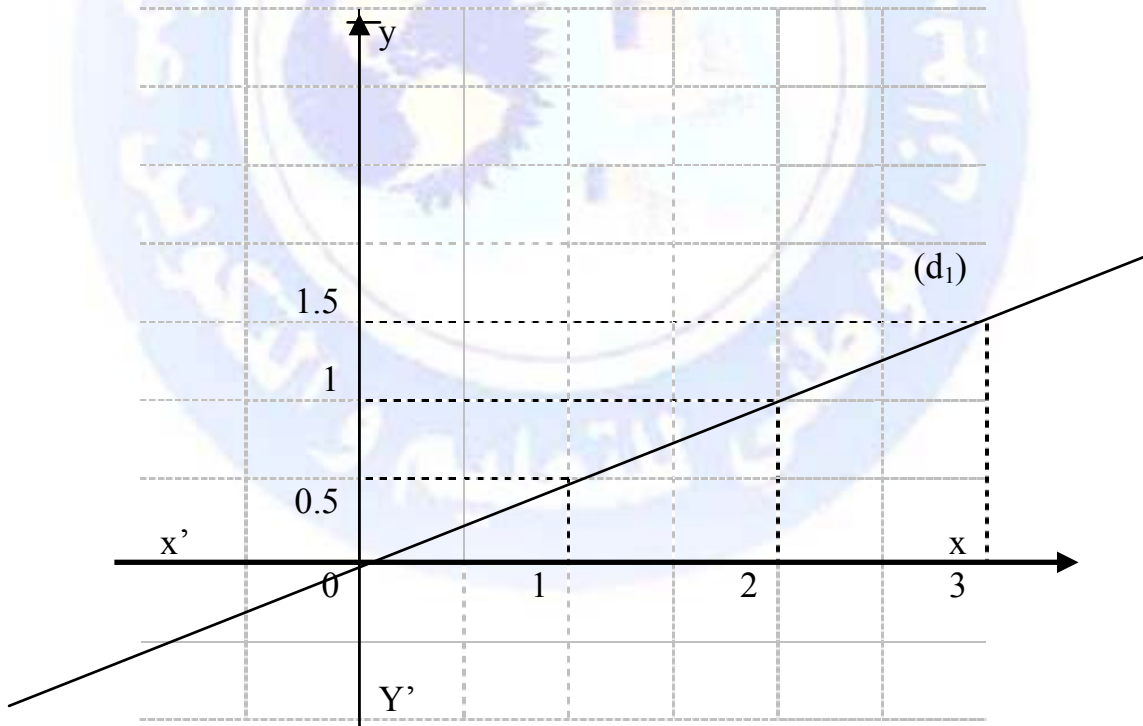
/1

1.1

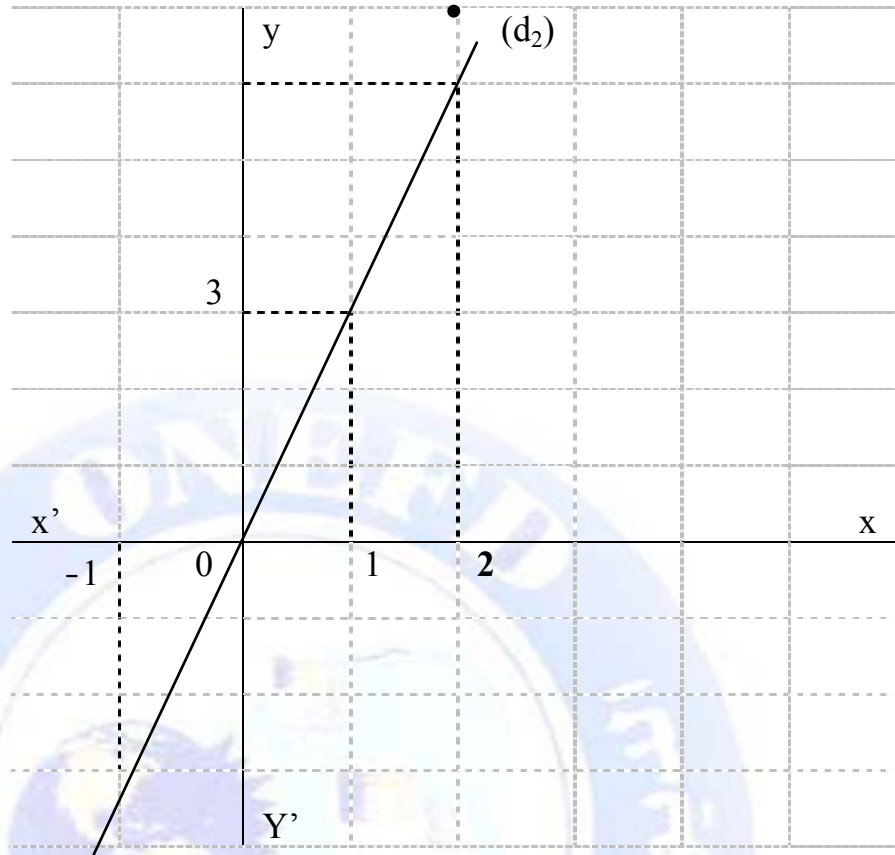
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*

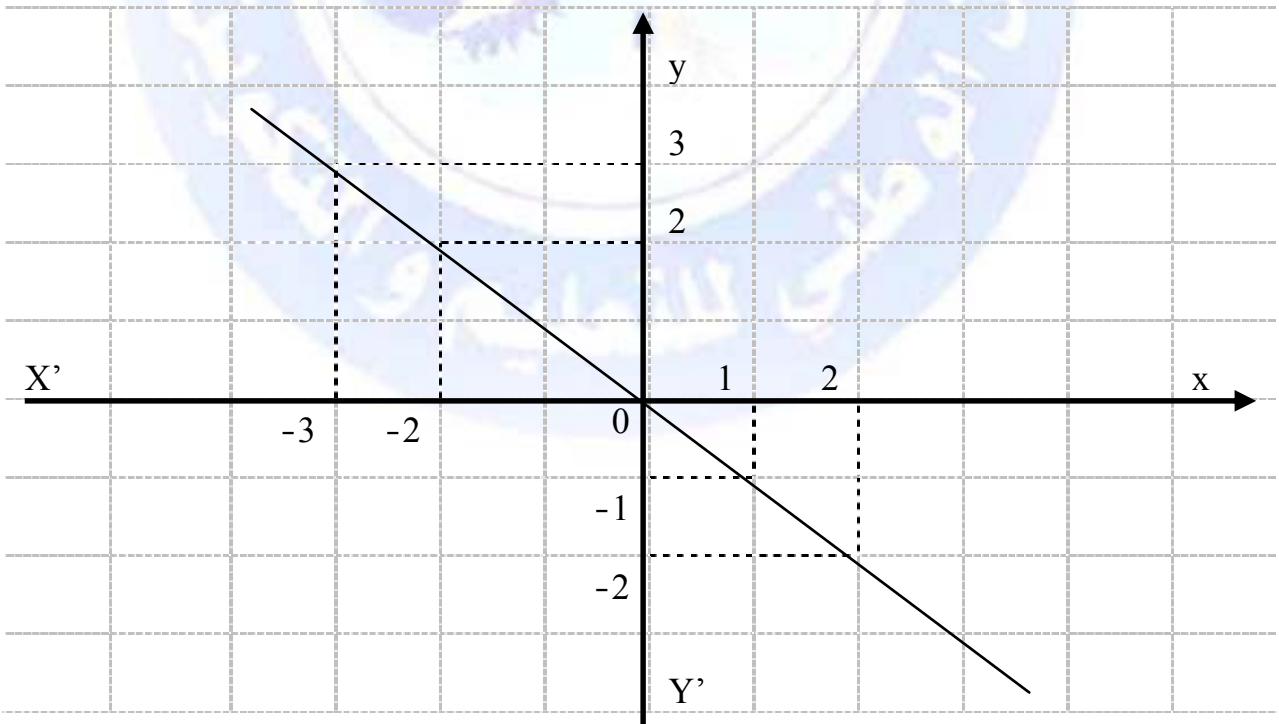
1



2



3



2.1

20 (CD-ROM)

X	4	6	10	12	15
Y					

f *

3. 1

X	7		-5	2
y		12		-8

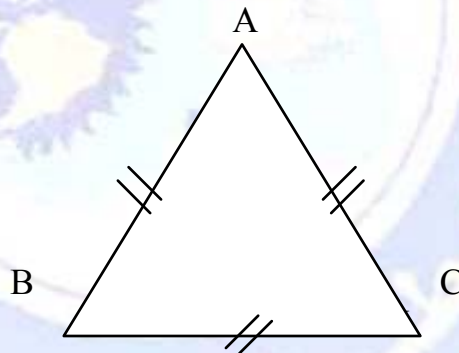
X	4		1	8
y		22		11

x. y *

x cm

ABC 4. 1

cm P(x)



-1

X	3	14	5
P(x)

-2

f -3

P(-5) -4

g 5. 1

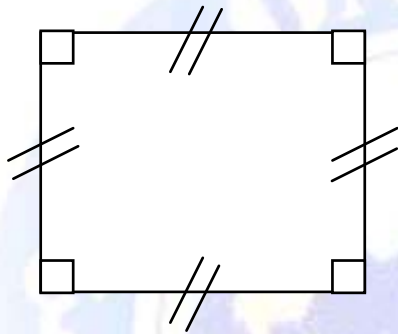
: -1

X	g(x)
-3
3/2
9

-2

A(x) 6. 1

x



x	3	4
A(x)	9	16

20%

"

: -2

1. 2

500

*

*

*

*

2. 2

-

. 20 %

6500

3. 2

30%

2800

4. 2

1850

5. 2

1200

.1

.2

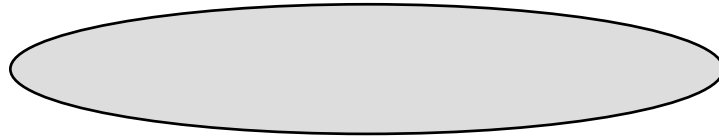
y

y

x

.3

.x y .



/1

: (1)

1.1

x	1	2	3
Y	0.5	1	1.5

×0.5

$\frac{1}{2}$ 0,5

: f

$$f : x \rightarrow \frac{1}{2}x$$

$$f(x) = \frac{1}{2}x$$

(2)

x	1	-1	2
Y	3	-3	6

×3

3

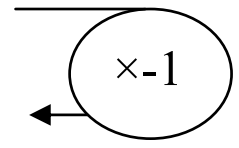
3 g

$$g : x \rightarrow 3x$$

$$g(x) = 3x$$

(3)

x	-3	-2	+1	2
Y	3	2	-1	-2



(-1)

(-1) h a

$$h : x \rightarrow ax$$

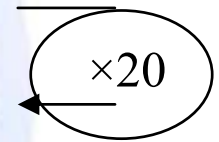
$$h : x \rightarrow (-1)xx$$

$$h : x \rightarrow -x$$

$$H(x) = -x$$

: /2

x	4	6	10	12	15
Y	80	120	200	240	300



$$20 = \frac{300}{15} = \frac{240}{12} = \frac{200}{10} = \frac{120}{6} = \frac{80}{4}$$

20 -
: f 1.2

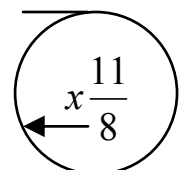
f

$$f : x \rightarrow 20x$$

$$f(x) = 20x$$

: 1.3

x	4	16	1	8
Y	$\frac{44}{8}$	22	$\frac{11}{8}$	11



x	7	-3	-5	2
Y	-28	12	20	-8

← -4

*

$$\frac{7}{x} = \frac{2}{-8}$$

x	7	2
Y	...	-8

$$2xX = -8x7 \quad :$$

$$2x = -56$$

$$\frac{1}{2}x2x = \frac{1}{2}x(-56)$$

$$x = -28$$

2. 3

	(-4)	(1)	-
	$\frac{11}{8}$	(2)	-

: _____ /4

$$P(x) = 3 \times X :$$

x	3	4	5
P(x)	9	12	15

← ×3

3

:

f

$$f : x \rightarrow 3x$$

$$f(x) = 3x$$

: P(-5) 1.4

$$P(x) = 3x$$

$$P(-5) = 3x(-5)$$

$P(-5) = -15$

: *

	P(-5)
	$g : x \rightarrow \frac{3}{2}x - 15$
	: 1.5

$$g(-3) = \frac{3}{2}x - 3$$

$$g(-3) = -\frac{9}{4}$$

$$g\left(\frac{3}{2}\right) = \frac{3}{2}x \frac{3}{2} = \frac{9}{4}$$

$$g(9) = \frac{3}{2}x9 = \frac{27}{4}$$

x	g(x)
-3	$-\frac{9}{4}$
$\frac{3}{2}$	$\frac{9}{4}$
9	$\frac{27}{4}$

: 2.5

$$g \quad \frac{3}{2}$$

/6

x	3	4
A(x)	9	16

$$3 = \frac{9}{3}$$

$$4 = \frac{16}{4}$$

$$\frac{9}{3} \neq \frac{16}{4}$$

*

$$x \rightarrow A(x) :$$

$$(\quad) A(x) = x^2 :$$



/1

$$500x \frac{200}{100} \quad 500 \quad 20\%$$

100

400

: x

f

*

$$y = \frac{20}{100}x$$

$$y = 0,2x$$

*

:

$$z = \left(x - \frac{P}{100} \right) x$$

$$z = \left(1 - \frac{P}{100} \right) x$$

علاقة انخفاض
مقدار بنسبة
P %

$$z = \left(1 - \frac{20}{100} \right) x$$

$$z = (1 - 0,2)x$$

$$z = 0,8x$$

:

:

	100	20
20 x	P	5

$$P = 5 \times 100 \quad :$$

$$20 \times P = 500$$

$$P = 25 \quad : \quad P = \frac{500}{20}$$

$$P = 25\% \quad 25\%$$

:

:

$$20xP = 500$$

$$P = \frac{500}{20} \quad :$$

$$P = 25 \%$$

:20%

/3

: P%

-

$$\left(1 - \frac{P}{100}\right)x$$

:

$$\left(1 - \frac{P}{100}\right)x = \left(1 - \frac{20}{100}\right) 6500$$

$$\left(1 - \frac{P}{100}\right)x = \text{ح } 5200$$

$$\cdot 5200 \quad 20\%$$

*

:30%

/4

P%

-

$$\left(1 + \frac{P}{100}\right)x$$

:

$$\left(1 + \frac{P}{100}\right)x = \left(1 + \frac{30}{100}\right) 2800$$

$$= (1 + 0,3) 2800$$

$$\left(1 + \frac{P}{100}\right)x = \text{ح } 3640$$

$$\cdot 3640$$

*

:

/5

$$1850 - 1200 = 650$$

$$\frac{650}{1850} \times 100 = 35,13$$

-

35,13%

$$\frac{650}{1200} \times 100 = 54,16$$

-

54,16 %

: x y -

$$\frac{35,13}{100} = 0,3513$$

$$0,3513 \approx 0,35$$

≈

$$y = \left(1 - \frac{35,13}{100}\right)x$$

$$y = (1 - 0,35)x$$

$$Y = 0,65 \%$$

