

/

:

-
-

/

()

.
//

()

.()

()

(-)

:

-
-
-
-

(- - - -) -
 : -
 : •
 :

		()
	///	5
	/// ///	10
	/// /// ///	13
	/// ///	8
	////	4
Sum		40

:

(-)

40

	$(f) ()$	
	5	$\left(\frac{5}{40}\right) = 0.125$
	10	$\left(\frac{10}{40}\right) = 0.25$
	13	$\left(\frac{13}{40}\right) = 0.325$
	8	$\left(\frac{8}{40}\right) = 0.20$
	4	$\left(\frac{4}{40}\right) = 0.10$
Sum	40	1.00

$$\text{التكرار النسبي} = \frac{\text{تكرار المجموعة}}{\text{مجموع التكرارات (n)}} = \left(\frac{f}{\sum f} \right) \quad (1-2)$$

(-)
 " " (-) : -
 32.5%
 10.0% " "
 (-)
 50

(- - - - -)
 :
 :

		()
		6
		10
		12
		15
		5
		2
Sum		50

:

(-)

50

	() (f)	
	6	0.12
	10	0.20
	12	0.24
	15	0.30
	5	0.10
	2	0.04
Sum	50	1.00

:

(-)

(-)

30%

5%

()

4%

:

//

(-)

56	65	70	65	55	60	66	70	75	56
60	70	61	67	61	71	67	62	71	66
68	72	57	68	72	69	57	71	69	75
72	62	67	73	58	63	66	73	63	65
58	73	74	76	74	80	81	60	74	58
76	82	77	83	77	85	91	78	94	72
79	64	57	79	55	87	64	88	78	62

:

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

80 70

70

80

Range(R)

Range = Maximum - Minimum

$$R = 94 - 55 = 39$$

:Classes(C)

:

15 5

.(C=8) : 8

:Length(L)

$$L = \frac{Range}{Classes} = \frac{R}{C} = \frac{39}{8} = 4.875 \approx 5$$

:

:

$$55 = ()$$

$$60 = 55 + 5 = 55 + L = + =$$

" 60 55 " " 55 to les than 60" :

$$60 = =$$

$$65 = 60 + 5 = + =$$

"65 60 " "60 to les than 65" :

:

80 70 -
 :
 (80 , 70) = 0.229 + 0.143 = 0.372
 . (80 , 70) 37.2%
 70 -
 :
 70 = 0.143 + 0.171 + 0.186 = 0.5
 70 50%
 80 -
 :
 80 = 0.057 + 0.043 + 0.028 = 0.128
 . 80 12.8%

/

Histogram

//

()

(-)

100

45

	600-	620-	640-	660-	680-	700-720	Sum
	10	15	20	25	20	10	100

:

-

(L)

طول الفئة = الحد الأعلى للفئة - الحد الأدنى للفئة
 $L = upper - Lower$

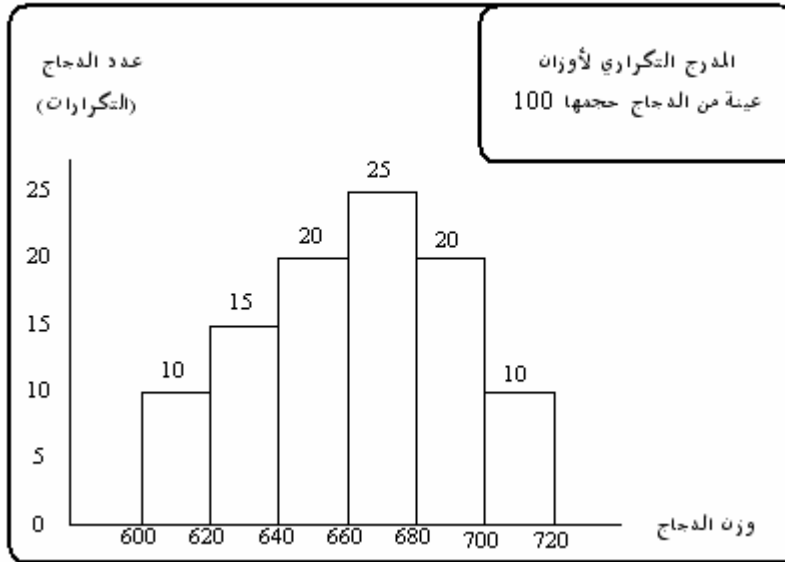
(٢-٢)

$L = 620 - 600 = 640 - 620 = \dots = 720 - 700 = 20$
 $20 =$

(-)

(-)

100

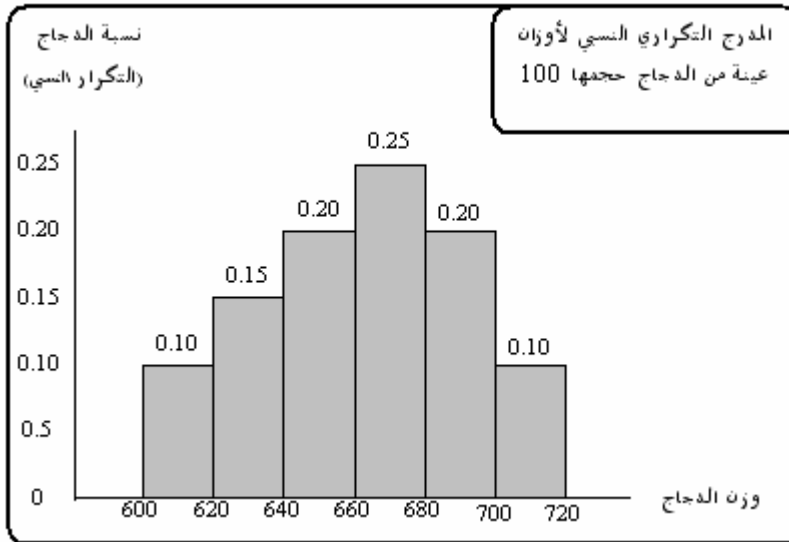


	600-	620-	640-	660-	680-	700-720	Sum
	10	15	20	25	20	10	100
	0.10	0.15	0.20	0.25	0.20	0.10	1.00

:

(-)

100



:

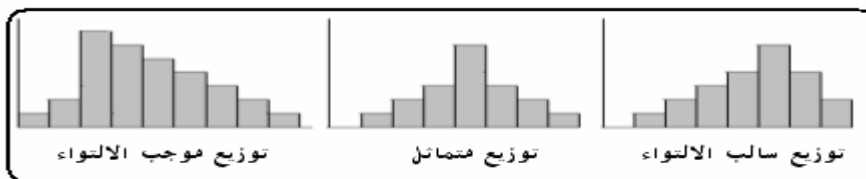
680 660

25%

.(n)

(660-680)

(-)



//

:

$$\text{مركز الفئة} = \frac{\text{الحد الأدنى للفئة} + \text{الحد الأعلى للفئة}}{2}$$

$$\text{Midpoint} = \frac{\text{Lower} + \text{Upper}}{2}$$

(٣-٢)

(-)

(-)

:

(-)

	()	(x)
600-	10	$(600+620)/2= 610$
620-	15	$(620+640)/2=630$
640-	20	650
660-	25	670
680-	20	690
700-720	10	$(700+720)/2=710$
Sum	100	

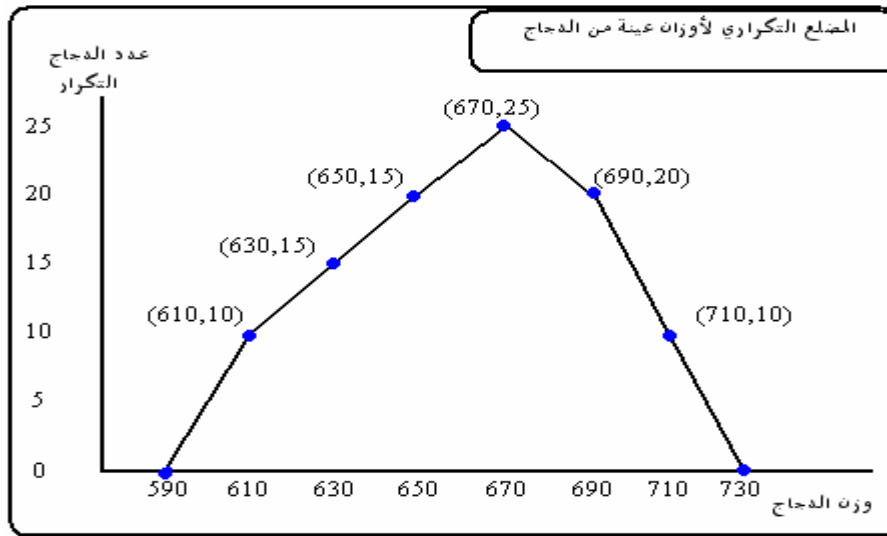
:

(x)	590	610	630	650	670	690	710	730
(y)	0	10	15	20	25	20	10	0

(-)

(-)

100

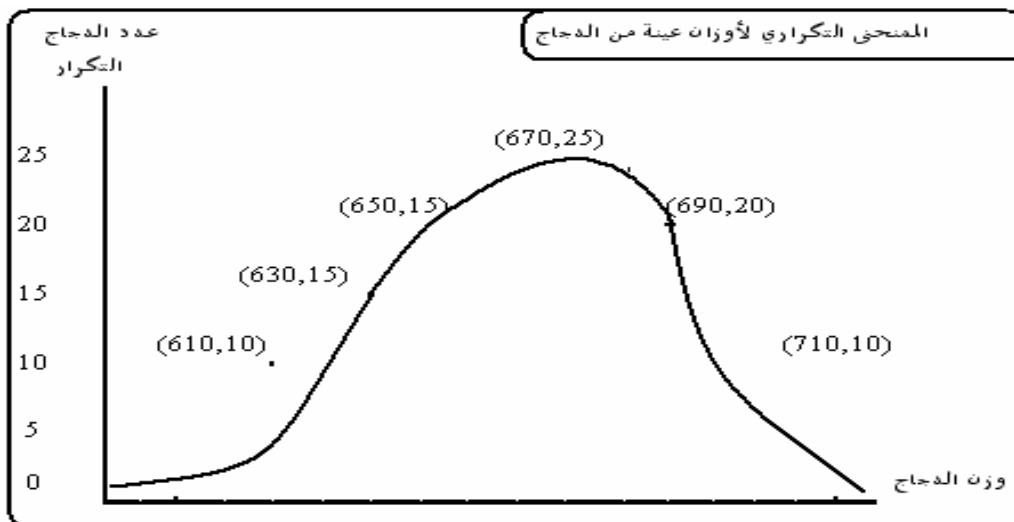


//

(-)

(-)

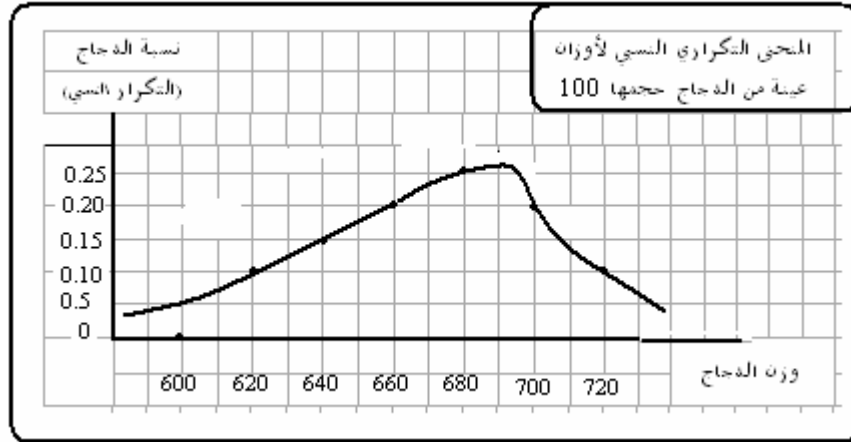
100



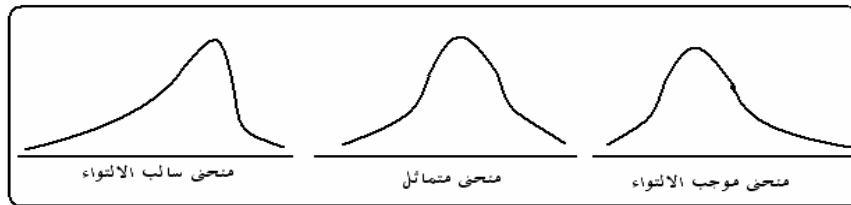
: (-)

(-)

100



:



/

:

//

()

(-)

40

	18-	22-	26-	30-	34-38	Sum
	4	9	15	8	4	40

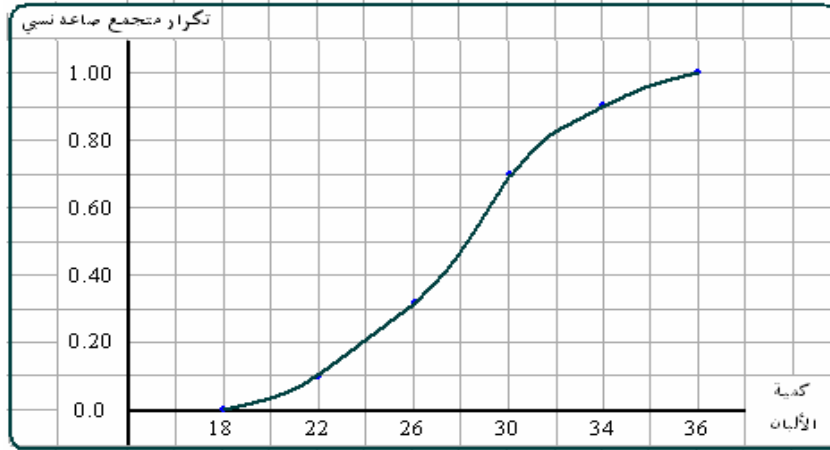
۳۵

.
: -
-
-
-
:
-
28 •
25% •
50% •
-
.

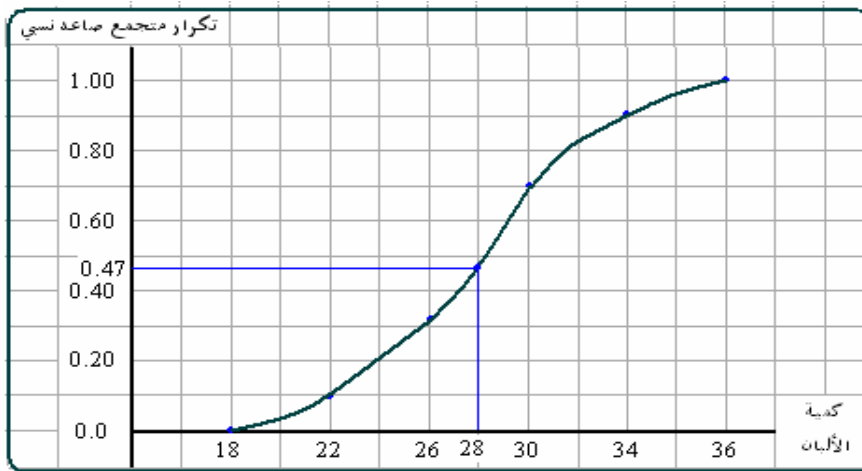
18-	4
22-	9
26-	15
30-	8
34-38	4
Sum	40

18	0	0.00
22	4	0.10
26	13	0.325
30	28	0.70
34	36	0.90
38	40	1.00

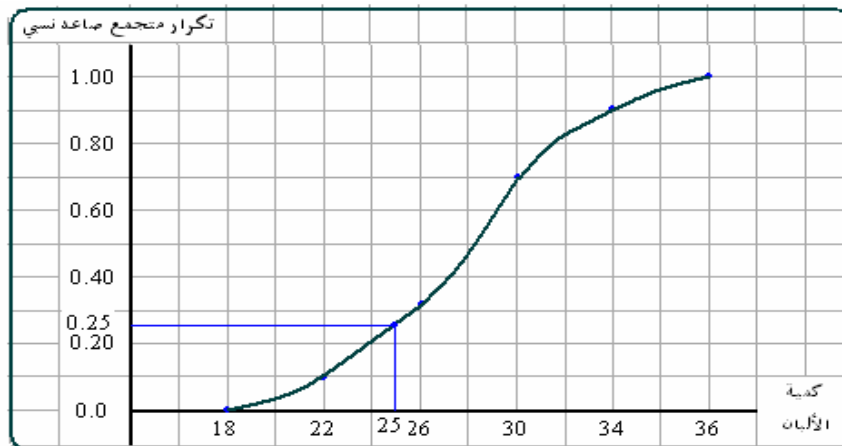
: -
.
:
:
:



0.47 28

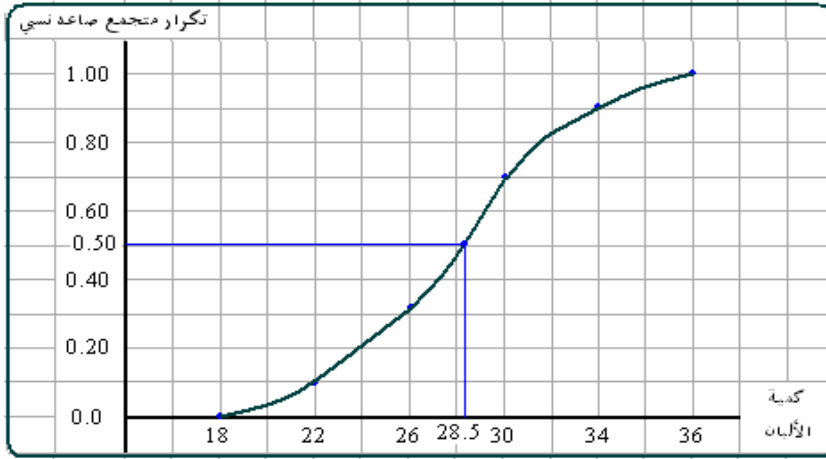


25 : 25%



28.5 : 50%

:



()

//

()

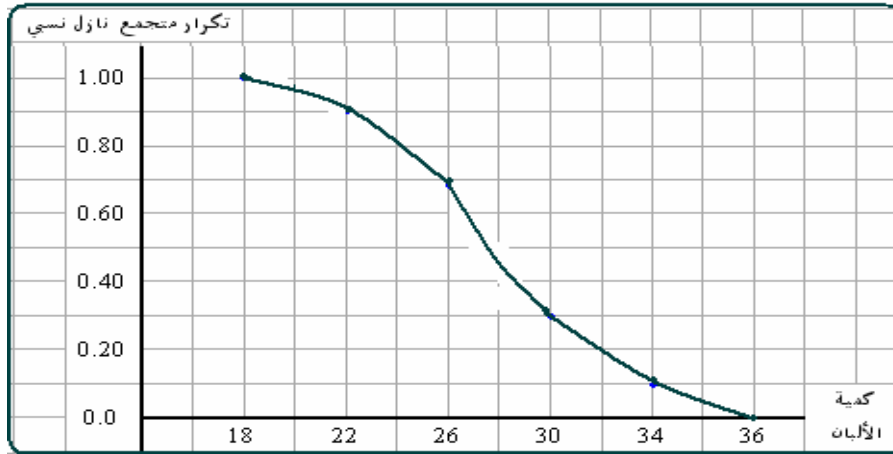
(-)

: (-)

-
-
:
-

18-	4
22-	9
26-	15
30-	8
34-38	4
Sum	40

18	40	1.00
22	36	0.90
26	27	0.675
30	12	0.30
34	4	0.10
38	0	0.00



:

-

-

/

//

360°

:

r

$$= 360^\circ \times$$

(-)

500

					sum
	150	130	50	170	500

:

:

-

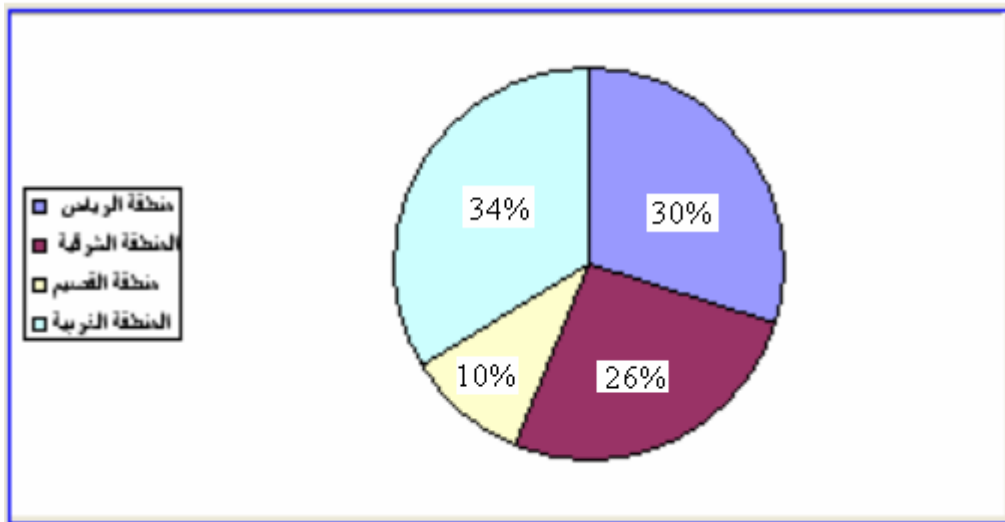
$$= 360^\circ \times$$

	150	0.30	$360 \times 0.30 = 108^\circ$
	130	0.26	$360 \times 0.26 = 93.6^\circ$
	50	0.10	$360 \times 0.10 = 36^\circ$
	170	0.34	$360 \times 0.34 = 122.4^\circ$
Sum	500	1.00	360°

-

:

(-)
500



34%

10%