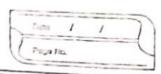
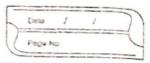
Tuno simple Dédinitions of Pexentiles There is no single unitersally accepted definition of a percentile. Didderent methods anyield disformt results, particularly in small datates what is a perscentile? A percentile represents the percentage of coordina a clateset that fall below a given value It helps us understand how an individual sore company to the set of the dataset doesn't tell you much
Howar, is you been tigt 65% of people scored lower trangon



=	Fepales
1	the population
	Definition 1 cd percentiles The 65+h percentile is the lowest score that is greater than 65%. Of the score Definition 2 1 11
-	Destinition ? Of possentiles The 65th possentile is the snallest score that is golden than or equal to 65 1. Of the scores
	while these definitions are simple, they can lead to significantly different results, especially with small datasets
	The challenge of Bounding don example, if there are 50 total scores.
	determine the 65th percentile
	Third Definition of Perentile (Interpolation Me-led) When reflecting to a poscentile, we less this third we definition, which is based on interpolation. This model courses smoother counding and better occurry compand to the dist two dedinations.



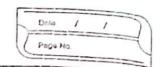
-6	Step by step	rethod to compute percentiles Rank(R) $R = \frac{P}{100} \times (N+1)$		
7	2 Cache ulate tu	Rank(R)		
		$P = P \times (N+1)$		
		100	1	
	Here Pis desir	ed poscertible. N is the total number of	of sales in	
	the datas	et.		
(z)	Beak Pinta	Integer (IR) and Fractich FD Purts per Portion of R mal Portion of R		
<i>2</i>	IR = Integ	lex Postson of R		
	FR-Deci	nal Postion as R		
-(3)	Find the Two close Lt values			
	Locate to	value at Rank IP	•	
		value at Pank IP+1		
4	1) Interpolate (If reade)			
	Id FR.	= 0 the percente is the value of	Runk IR	
P+r pescentile = Value at IR+ (FR x(value at IR+1-Va				
	Examples			
and the second second second	Eq 1 257			
	Number	Renk		
-	3	1	•	
	5	2		
	7	3		
	8	ч. ч		
	9	5		
The same of the same of	27	6	Antonia an against an against an against a aga	
	13	7		
	15	8	The second secon	
51	The same of the sa			



Stepl Compute Pie. P=P x (N+7) = (25/100) × (8+2) = 7.25 IR = 2 FR = 0.75 Step? : Find values value at Bank 2 = 5 Value at Rank 3 = 7 Step 3 Apply interpolation 25th percentile = 5-5 Special rate: Exact Rank Match For even-numbered datasets, the 50th percentile (Median) might land oxactly on a data point Egl-50th pes centile for 5 number Rank Namber 11 Rank = P100 (N+I)

 $= \frac{(50)_{100}(N71)}{= 3}$

Since IR=3, FR=0 . the 50th Poscertile=5



Peasson Cosselation Coldficient (8) - Explained Simply

Nhat is plasson Cosselation?

Dearson cosselation (denoted as x for complex and placed populations) measures the strength and direction cost a linear relationship between two variables.

· It x=1, there is a posted postive linear relationship (As one variable increases, the other increase propositions)

· If &=-1, there is a perfect regative linear relationship.

(As one variable incoroses, the other decreaser proportion

the variables.

Real would Examples

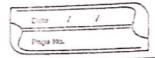
· Pardect Positive (orselation (x=1)

The relationship between (objus and Faxonteit temperatures (Exact, direct increase)

Porsect Negative (asselation es=-1)

The amount of tuel in a case tank us distance
driven (us one increases, the other decreases)

No cosselation Shoc size and intellegence (no relationship)



	Propa NO.
	key proposties of Pearson's Correlation (x) - simplified
E	Parge of Pearson's &
	Talle Pot Hall
	8 = 1 > perdect positive liver relationship
	- postect reactive linear of lotionship
	= 0 -) No lipox relationship
-	
12	Junistry Becompty
	Sympetry Pscpxty a The correlation of X with Y is the care as the cosselation of Y with X
	cosselation of y with x
	is the same as between Height and height
	Is the same as between Height and height
(3)	Edde of od linear Transformations
	Pearson's & do esnot clange it you.
	· Multiply a variable by a constant (eg conexting
	17(D) 70 0012
	· Add os subtoact a constant cog adding 5 parts
	to all exemsores)
	Takeanay: Peason's & only captures linear solctionship and is independent of unit Changes as shifts
	and is independent of unit charges as shifts
-	in scole!
-	
	The state of the s