

Have You Made Full Use of the OCR Feature?

Make a scan, enhance it and save it. Are these all the features you know about CamScanner? If so, you have missed too many cool experiences.



CamScanner offers you lots of features rather than scanning. What we are sharing today is the OCR (Optical Character Recognition) feature.

What can you do with OCR feature?

1. Searching

What can you do if you want to search for a document but just can't remember the names of some docs? Use this feature to recognize all the texts on your scans. Next time you just need to enter some key words in the search box and all the documents within the words will be found.

2. Text extraction

Just purchase the one-time paid version and you can enjoy the text extraction for lifetime! Ever want to edit some texts on a paper document or a PDF file? Import it into CamScanner and all texts can be extracted as .txt file after OCR!

Why wait? Follow the steps to start using OCR!

1. Sign in to CamScanner to sync all your docs → All texts will be auto recognized after syncing.

2. If you don't want to sign in, you can open one single page of any doc → Tap the Recognize button → All recognized texts will be shown in a dialog box → Tap Share to export the texts.

Q2

(9)

→ For men
overall mean consumption of Fresh Vegetables

$$\text{Mean} = \frac{204 + 259 + 266 + 217}{4}$$

$$= 236.5$$

→ Mean of Fruits

$$\text{Mean} = \frac{31 + 45 + 69 + 105}{4} = 62.5$$

→ Mean of Rice

$$\bar{x} = (367 + 337 + 269 + 246) / 4$$

$$= 304.75$$

→ Mean of fish

$$\bar{x} = 23 + 28 + 31 + 44$$

$$= 31.5$$

→ Mean of meat

$$\bar{x} = \frac{70 + 62 + 69 + 77}{4}$$

$$= 69.25$$

→ For women

mean of fresh vegetables

$$\bar{x} = 178 + 235 + 266 + 304$$

Mean of Fruits

$$\bar{x} = \frac{28 + 46 + 70 + 121}{4} = 66.25$$

Mean of Rice:

$$\bar{x} = \frac{315 + 276 + 243 + 220}{4} = 263.5$$

Mean of meat

$$\bar{x} = \frac{48 + 43 + 54 + 63}{4} = 52$$

Mean of fish:

$$\bar{x} = \frac{19 + 21 + 28 + 46}{4} = 28.5$$

Combined Mean

Combined mean For Men

C.M of Fresh Vegetables

$$\bar{x}_{comb} = \frac{\bar{x}_1 n_1 + \bar{x}_2 n_2 + \dots + \bar{x}_m n_m}{n_1 + n_2 + \dots + n_m}$$

$$= \frac{[(236.5)(204) + (236.5)(259) + (236.5)(266) + (236.5)(47)]}{204 + 259 + 266 + 217} = 236.5$$

Combined Mean of Rice =

$$\bar{x}_c = (367)(304.75) + (337)(304.75) + (269)(304.75) + (246)(304.75)$$

Com mean
c.m of fish.

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$$\bar{x}_c = \frac{(23)(31.5) + (31.5)(28) + (31)(31.5) + (31.5)(44)}{23 + 28 + 31 + 44}$$

$$\bar{x}_c = 31.5$$

C.mean of meet.

$$\bar{x}_c = \frac{(69.25)(70) + 69.25(61) + (69.25)(69) + (69.25)(70)}{70 + 61 + 69 + 70}$$

$$\bar{x}_c = 69.25$$

Combined Mean of woman.

$$\bar{x}_c = \frac{[(245.75)(178) + (245.75)(235) + (245.75)(266) + (245.75)(304)]}{178 + 235 + 266 + 304}$$

$$\bar{x}_c = 245.75$$

Com. Mean of Meet

$$\bar{x}_c = \frac{(52)(48) + (52)(43) + (52)(54) + (52)(63)}{48 + 43 + 54 + 63}$$

$$\bar{x}_c = 52$$

C.m of fish:

$$\bar{x}_c = \frac{(28.5)(19) + (28.5)(21) + (28.5)(28) + (28.5)(46)}{19 + 21 + 28 + 46}$$

$$\bar{x}_c = 28.5$$

but it rises high in Q2 and Q3 so those

who eat most vegetable consume much more

milk root vegetable and wheat from them

those who eat less fresh vegetable.



(c)

In fruit and fish the value of men

increasing from Q4 to Q2 in men and

women. But in Rice the value of

men decreasing from Q4 to

Q2.

$$\textcircled{6} \quad \text{Mode} = l + \frac{f_m - f_1}{(f_m - f_1) + (f_m - f_2)} \times h$$

l = lower class boundaries of the modal class

f_m = Frequency of the modal class

f_1 = Frequency associated with the class preceding the modal class.

f_2 = Frequency associated with the class following the modal class.

h = width of class interval

So, the Mode, can be

$$\begin{aligned} \text{Mode} &= 34.5 + \frac{\cancel{34.5} - (8-5)}{(8-5) + (8-5)} \times 5 \\ &= 34.5 + \frac{3}{3+3} \times 5 \end{aligned}$$

$$\boxed{\text{Mode} = 37}$$

$\textcircled{5}$

⑦ **Quartiles:** The Three value which divide the distribution into four equal parts are called the Quartiles.

These value are denoted by Q_1 , Q_2 and Q_3 . Q_1 is called the lower quartile and Q_3 are called upper quartile. Q_2 is called Median. So, we shall calculate Q_1 and Q_3 .

$$Q_1 = \left(\frac{n}{4}\right)^{th}$$
$$= \left(\frac{25}{4}\right)^{th}$$

$= (6.25)^{th}$, which associated in the class $(29.5 - 34.5)$. Therefore

$$Q_1 = l + \frac{h}{f} \left(\frac{n}{4} - c.f \right)$$

$$= 29.5 + \frac{5}{5} (6.25 - 4)$$

$$= 29.5 + 2.25$$

$$\boxed{Q_1 = 31.75}$$

⑥

⑩

$$\begin{aligned} \text{M.D} &= \frac{\sum_{i=1}^n f_i |x - \bar{x}|}{\sum_{i=1}^n f_i} \\ &= \frac{136.4}{25} \end{aligned}$$

$$\boxed{\text{M.D} = 5.46}$$

⑪

$$\begin{aligned} \text{Variance} &= \frac{\sum_{i=1}^n f_i (x - \bar{x})^2}{\sum_{i=1}^n f_i} \\ &= \frac{1373.96}{25} \end{aligned}$$

$$\boxed{\text{Variance} = 54.96}$$

⑫

$$\begin{aligned} \text{Standard Deviation} &= \sqrt{\text{Variance}} \\ &= \sqrt{54.96} \end{aligned}$$

$$Q_3 = \left(\frac{3n}{4}\right)\bar{h}$$

$$= \left(\frac{3 \times 25}{4}\right)\bar{h}$$

$= (18.75)\bar{h}$, which corresponds in the class, $(39.5 - 44.5)$. Therefore

$$Q_3 = l + \frac{h}{7} \left(\frac{3n}{4} - c.f\right)$$

$$= 39.5 + \frac{5}{5} (18.75 - 17)$$

$$= 39.5 + 1.75$$

$$\boxed{Q_3 = 41.25}$$

(7)

⑨ Percentile: which divide the distribution into hundred equal parts. are called percentile, which is denoted by

$P_1, P_2 \text{ ————— } P_{99}$.

As;

$$P_{30} = \left(\frac{30n}{100} \right) \bar{h}$$

$$= \left(\frac{30 \times 25}{100} \right) \bar{h}$$

$= (7.5) \bar{h}$, which associated in the class $(29.5 - 34.5)$. So

$$P_{30} = l + \frac{h}{7} \left(\frac{30n}{100} - c.f \right)$$

$$= 29.5 + \frac{5}{5} (7.5 - 4)$$

$$= 29.5 + 3.50$$

$P_{30} = 33$

⑨

$$\textcircled{4} \text{ Median} = \left(\frac{n}{2}\right)^{\text{th}}$$

$$= \left(\frac{25}{2}\right)^{\text{th}}$$

$= (12.5)^{\text{th}}$, which lies b/w
in the class 34.5-39.5. Therefore

$$\text{Median} = l + \frac{h}{f} \left(\frac{n}{2} - c.f\right)$$

$$= 34.5 + \frac{5}{8} (12.5 - 9)$$

$$= 34.5 + \frac{5}{8} (3.5)$$

$$= 34.5 + 2.19$$

So,

Median = 36.69

$\textcircled{5}$ Range = Height class upper boundaries
- Lowest class lower boundaries

$$= 59.5 - 19.5$$

Range = 40

$\textcircled{4}$

$$\textcircled{1} \quad A.M = \frac{\sum_{i=1}^n f_i x_i}{\sum_{i=1}^n f_i} = \frac{920}{25}$$

$$A.M = 36.80$$

$$\textcircled{2} \quad H.M = \frac{\sum_{i=1}^n f_i}{\sum_{i=1}^n \left[\frac{f_i}{x_i} \right]} = \frac{25}{0.693}$$

$$H.M = 36.08$$

$$\textcircled{3} \quad G.M = \text{Anti-log} \left[\frac{\sum_{i=1}^n f_i \log(x_i)}{\sum_{i=1}^n f_i} \right]$$

$$= \text{Anti-log} \left[\frac{38.8}{25} \right]$$

$$= \text{Anti-log} (1.55)$$

$$G.M = 35.48$$

③

⑧ Deciles: which divide the distribution into ten equal parts, are called Deciles, which is denoted by D_1, D_2, \dots, D_9 .

The calculation of each Decile to be calculated is too large and time consuming.

So, for the practice, we can calculate D_2 .

$$D_2 = \left(\frac{2n}{10} \right) \bar{h}$$

$$= \left(\frac{2 \times 25}{10} \right) \bar{h}$$

$$= 5 \bar{h}, \text{ which corresponds in the class, } (29.5 - 34.5). \text{ Therefore}$$

$$D_2 = l + \frac{h}{7} \left(\frac{2n}{10} - c.f \right)$$

$$= 29.5 + \frac{5}{5} (5 - 4)$$

$$= 29.5 + 1$$

$$\boxed{D_2 = 30.5}$$

⑧

x	$1/x$	\dots

$$SK = \frac{36.80 - 37}{7.41}$$

$$= \frac{-0.20}{7.41}$$

$$\text{Skewness} = -0.03$$

12

(1) (5) Median : Median is the mid-value of a data set.

$$\text{Median} = \left[\left(\frac{n}{2} \right) + 1 \right] \text{th}$$

$$= \left[\left(\frac{25}{2} \right) + 1 \right] \text{th}$$

$$= (12 + 1) \text{th}$$

Median = 13th, integer } a data set

$$\boxed{\text{Median} = 37}$$

(6) Quantiles :

$$Q_1 = \left[\left(\frac{n}{4} \right) + 1 \right] \text{th}$$

$$= \left[\left(\frac{25}{4} \right) + 1 \right] \text{th}$$

$$= (6.25 + 1) \text{th}$$

$$= (7.25) \text{th}$$

$$= 7 \text{th}$$

$$\boxed{Q_1 = 32}$$

(15)

(13)

Coefficient of Variation (C.V) =

$$\frac{S.D}{\bar{x}} \times 100$$

$$= \frac{7.41}{36.80} \times 100$$

$$\boxed{C.V = 20.14}$$

(14)

Quartile Deviation (Q.D) = $\frac{Q_3 - Q_1}{2}$

where, $Q_3 = 41.25$ and $Q_1 = 31.75$

$$\text{So } Q.D = \frac{41.25 - 31.75}{2}$$

$$\boxed{Q.D = 4.75}$$

(15)

Skewness (SK) = $\frac{\text{Mean} - \text{Mode}}{S.D}$

where, Mean = 36.80, Mode = 37

and S.D = 7.41

(11)

$$\textcircled{1} \quad A.M = \frac{\sum_{i=1}^n X_i}{n} = \frac{920}{25}$$

$$\boxed{A.M = 36.8}$$

$$\textcircled{2} \quad H.M = \frac{n}{\sum_{i=1}^n (1/x_i)} = \frac{25}{0.73}$$

$$\boxed{H.M = 34.25}$$

$$\textcircled{3} \quad G.M = \text{Anti-log} \left[\frac{\sum_{i=1}^n \log(x_i)}{n} \right]$$

$$= \text{Anti-log} \left[\frac{38.92}{25} \right]$$

$$= \text{Anti-log}(1.56)$$

$$\boxed{G.M = 36.04}$$

$\textcircled{4}$ Mode: Most repeated value is called

Mode:

So,

$$\boxed{\text{Mode} = 37}$$

$\textcircled{14}$

(13)

$$\text{Mean Deviation} = \frac{\sum_{i=1}^n |x - \bar{x}|}{n}$$

$$= \frac{136.40}{25}$$

$$\boxed{\text{M.D} = 5.46}$$

(14)

$$\text{Variance} = \frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n}$$

$$= \frac{1172.12}{25}$$

$$\boxed{\text{Variance} = 46.88}$$

(15)

$$\text{S.D} = \sqrt{\text{Var}}$$

$$= \sqrt{46.88}$$

$$\boxed{\text{S.D} = 6.85}$$

(18)

$$\text{Range} = \text{Largest value} - \text{Smallest value}$$
$$= 57 - 22$$

$$\boxed{R = 35}$$

$$Q.D = \frac{Q_3 - Q_1}{2}$$

$$= \frac{42 - 32}{2}$$

$$\boxed{Q.D = 5}$$

$$\text{Skewness} = \frac{\text{Mean} - \text{mode}}{S.D}$$
$$= \frac{36.8 - 37}{7.41}$$

$$= \frac{-0.20}{7.41}$$

$$\boxed{\text{Skewness} = -0.03}$$

$$\text{Coefficient of Variation (C.V.)} =$$

$$= \frac{S.D}{\bar{x}} \times 100$$

$$= \frac{7.41}{36.8} \times 100$$

$$\boxed{C.V = 20.14}$$

(17)

x	$1/x$	$\log(x)$	$(x - \bar{x})$	$(x - \bar{x})^2$	$ x - \bar{x} $
22	0.045	1.34	-14.8	219.04	14.8
(27)	0.037	1.4313	-9.8	96.04	9.8
27	0.037	1.4313	-9.8	96.04	9.8
27	0.037	1.4313	-9.8	96.04	9.8
32	0.0312	1.5051	-4.8	23.04	4.8
32	0.0312	1.5051	-4.8	23.04	4.8
32	0.0312	1.5051	-4.8	23.04	4.8
32	0.0312	1.5051	-4.8	23.04	4.8
32	0.0312	1.5051	-4.8	23.04	4.8
37	0.027	1.5682	0.2	0.04	0.2
37	0.027	1.5682	0.2	0.04	0.2
37	0.027	1.5682	0.2	0.04	0.2
37	0.027	1.5682	0.2	0.04	0.2
37	0.027	1.5682	0.2	0.04	0.2
37	0.027	1.5682	0.2	0.04	0.2
37	0.027	1.5682	0.2	0.04	0.2
37	0.027	1.5682	0.2	0.04	0.2
42	0.0238	1.6232	5.2	27.04	5.2
42	0.0238	1.6232	5.2	27.04	5.2
42	0.0238	1.6232	5.2	27.04	5.2
42	0.0238	1.6232	5.2	27.04	5.2
42	0.0238	1.6232	5.2	27.04	5.2
47	0.0212	1.6720	1.76	3.10	1.76
47	0.0212	1.6720	1.76	3.10	1.76
57	0.019	1.7558	20.2	408.04	20.2
Total	0.73	38.92		1172.12	136.40

(f)	(x)	$f \cdot x$	f/x	$\log(x)$	$f \log(x)$
Number of years	Mid-Points				
1	22 22	22	0.0416	1.34	1.34
3	25 27	81	0.12	1.43	4.29
5	32	160	0.15	1.50	7.5
8	37	296	0.21	1.56	12.48
5	42	210	0.11	1.62	8.1
2	47	94	0.04	1.67	3.34
0	52	0	0	1.71	0
1	57	57	0.017	1.75	1.75

$$\begin{aligned}
 Q_3 &= \left[\left(\frac{3n}{4} \right) + 1 \right] \bar{h} \\
 &= \left[\left(\frac{3 \times 25}{4} \right) + 1 \right] \bar{h} \Rightarrow (19.75) \bar{h} \\
 &= (20) \bar{h}, \text{ Integer}
 \end{aligned}$$

$$\boxed{Q_3 = 42}$$

(7) Deciles:

$$\begin{aligned}
 \text{As, } D_2 &= \left[\left(\frac{2n}{10} \right) + 1 \right] \bar{h} \Rightarrow \left[\left(\frac{2 \times 25}{10} \right) + 1 \right] \bar{h} \\
 &= (5+1) \bar{h} \Rightarrow 6 \bar{h}, \text{ Integer}
 \end{aligned}$$

$$\boxed{D_2 = 32}$$

(8) Percentile:

$$\begin{aligned}
 \text{As, } P_{30} &= \left[\left(\frac{30n}{100} \right) + 1 \right] \bar{h} \\
 &\Rightarrow \left[\left(\frac{30 \times 25}{100} \right) + 1 \right] \bar{h} \\
 &= (7.50+1) \bar{h} \Rightarrow (8.50) \bar{h}
 \end{aligned}$$

$$P_{30} = 9 \bar{h}, \text{ Integer}$$

$$\boxed{P_{30} = 32}$$

(11)

The response rate might
be less other area of
concern are cost
Pressure

Part 'p':
↙ :-

There may be
additional concern about
Security of information when
it is supplied online additional
information held by government
agencies is unlikely to be
complet record matching in
combining data basis is
a notobius problem.

(10) (2)

Collected to know about
Population and of following
base for planning and
Policy development

Part 'D'

Ironic response to
the census by public
signify their into word
attitude to the Survey
and their carelessness in
following accurate data.

Questions of these type
are invalidated with such
abuse responses

Part 'e'

Not all of the population
is an internet friendly so may

P.T.O

(9)

information about the population
from the entire population.

it is more suitable to
use census method if
population is sum in nature
The census survey is much
bigger in population compare
to sample survey census
survey takes more time
However it is margin for
error in sample survey which
census survey is more correct.

Part: C

obviously not having
a full response rate to
the census is problem for
the accuracy of census as
insufficient data will be

P.T.O

Q2 Part: a

The Purpose of census is to count the entire population of a country and individual at location where they actually live. Census count the number of living in the home. their age, sex and race, it helps in the forming and important base for planning Policy development and decreasing unemployment.

Part: b

In census each and every unit of population is studied in the sampling. the census refers to periodic collection of

P.T.O