Part A – Disposal of Waste

G(1): for all sources of waste disposal

Mean for Canada = $\frac{24,081,371+25,226,766+26417011+25926476+24952415+24681474+25103034}{7}$

$= 25198364$

Mean for Newfoundland & Labrador

Mean = $\frac{376594+400048+428809+399184+394235+391571+415158}{7}$

$= 400800$

Mean for prince Edward Island = 0

Mean for Nova Scotia

Mean = $\frac{389194+399967+359105+354231+367246+365079+364193}{7}$

$= 371288$

for New Brunswick

$$\text{Mean} = \frac{413606 + 442173 + 511706 + 479461 + 475265 + 492938 + 508115}{7}$$

$$= 474752$$

for Quebec

$$\text{Mean} = \frac{5846459 + 6454000 + 6808440 + 6146319 + 5795707 + 5584621 + 5714630}{7}$$

$$= 6050025$$

for Ontario

$$\text{Mean} = \frac{9645633 + 9809264 + 9710459 + 9631559 + 9247415 + 9208839 + 9165299}{7}$$

$$= 9488353$$

for Manitoba

$$\text{Mean} = \frac{896556 + 928117 + 904272 + 945441 + 1020481 + 1017663 + 1026522}{7}$$

$$= 962722$$

for Saskatchewan

$$\text{Mean} = \frac{795124 + 794933 + 833753 + 902943 + 937268 + 957670 + 940595}{7}$$

$$= 880327$$

for Alberta

$$\text{Mean} = \frac{2890294 + 3077311 + 3819872 + 4147558 + 3917492 + 3913924 + 4097584}{7}$$

$$= 3694862$$

for British Columbia

$$\text{Mean} = \frac{2687882 + 2767657 + 2917080 + 2811568 + 2658271 + 2604147 + 2721309}{7}$$

$$= 2738273$$

for Yukon, Northwest Territories and Nunavut

$$\text{Mean} = \frac{0}{7}$$

$$= 0$$

Q8:

formula of percentile rank $= \frac{100(i-0.5)}{n}$

where i = rank of the data in order

n = Total number of data

Here we have,

0, 0, 2599016, 2805600, 3323264, 6162289, 6739054, 19167911, 25864034, 42350175, 66418471 in order from lowest to highest.

Percentile rank of Prince Edward Island $= \frac{100(1-0.5)}{11}$

$= 4.54$

Same for Yukon, Northwest Territories and Nunavut

for Nova Scotia $= \frac{100(3-0.5)}{11}$

$= 22.72$

for Newfoundland and Labrador $= \frac{100(4-0.5)}{11}$

$= 31.82$

for New Brunswick $= \frac{100(5-0.5)}{11}$

$= 40.9$

for Saskatchewan $= \frac{100(6-0.5)}{11}$

$= 50$

for Manitoba $= \frac{100(7-0.5)}{11}$

$= 59.1$

for British columbia $= \frac{100(8-0.5)}{11}$

$= 68.18$

for Alberta $= \frac{100(9-0.5)}{11}$

$= 77.27$

for Quebec $= \frac{100(10-0.5)}{11}$

$= 86.36$

for Ontario $= \frac{100(11-0.5)}{11}$

$= 95.45$

Part B)

Q 8: The data in Ascending order : 17836, 62604

95666, 932906, 998736, 1239135, 1797163,

4971747, 9958605, 16277691, 18494184

Percentile rank for Yukon, Northwest Territories and Nunavut $= \frac{100(1-0.5)}{11}$

$= 4.54$

for Prince Edward Island = 13.63

for Newfoundland and Labrador = 22.72

for Saskatchewan = 31.82

for New Brunswick = 40.9

for Manitoba = 50

for Nova Scotia = 59.1

for Alberta = 68.18

for British Columbia = 77.27

for Quebec = 86.36

for Ontario = 95.45

Part B)

Q10: Organics diverted in 2002 = 1310790

Organics diverted in 2014 = 2686532

$$\text{Percentage increase} = \frac{2686532 - 1310790}{1310790} \times 100$$

$$= \boxed{104.95\ \%}$$