

ACTIVITY 3: Commando 38

$$1) \mu = \frac{35+40+37+38+40}{5}$$

$$\boxed{\mu = 38}$$

$$2) \sigma^2 = \frac{\sum (x - \mu)^2}{N} = \frac{9}{5} + \frac{4}{5} + \frac{1}{5} + 0 + \frac{4}{5} = \boxed{3.6}$$

$$3) \sigma = \sqrt{\sigma^2} = \sqrt{3.6} = \frac{3\sqrt{10}}{5} = \boxed{1.90}$$

$$4) \frac{37+35}{2} = \frac{72}{2} = \boxed{36}$$

$$5) \frac{35+40}{2} = \frac{75}{2} = \boxed{37.5}$$

$$6) \frac{38+37}{2} = \frac{75}{2} = \boxed{37.5}$$

$$7) \frac{40+38}{2} = \frac{78}{2} = \boxed{39}$$

$$8) \frac{40+40}{2} = \frac{80}{2} = \boxed{40}$$

9-12)

X	35	35.5	36	36.5	37	37.5	38	38.5	39	39.5	40
P(X)	$\frac{1}{25}$	0	$\frac{2}{25}$	$\frac{2}{25}$	$\frac{1}{25}$	$\frac{6}{25}$	$\frac{1}{25}$	$\frac{4}{25}$	$\frac{4}{25}$	0	$\frac{4}{25}$
	or	or	or	or	or	or	or	or	or	or	or
	0.04	0	0.08	0.08	0.04	0.24	0.04	0.16	0.16	0	0.16

$$13) \mu_{\bar{x}} = \sum [x \cdot P(x)]$$

$$= 1.4 + 0 + 2.88 + 2.92 + 1.48 + 9 + 1.52 + 6.16 + 6.24 + 0 + 6.4$$

$$\boxed{= 38}$$

$$14) \sigma_{\bar{x}}^2 = 0.36 + 0 + 0.32 + 0.18 + 0.04 + 0.06 + 0 + 0.04 + 0.16 + 0 + 0.64$$

$$\boxed{= 1.8}$$

$$15) \sigma = \sqrt{\sigma_{\bar{x}}^2} = \sqrt{1.8} = \frac{3\sqrt{5}}{5} = \boxed{1.34}$$

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