$$1 - a)\; \theta_1 = l^x + \frac{\frac{12l}{5} - Fac\overline{w}}{l^{x}} \cdot h$$

$\frac{40 - 20}{2}$

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$$1{,}60 + \frac{\frac{40}{4} - 16}{10} \cdot 0{,}10$$

$$1{,}60 + \frac{10 - 16}{10} \cdot 0{,}10$$

$$1{,}60 + \frac{-6}{10} \cdot 0{,}10$$

$$\boxed{\theta_1 = 1{,}54}\; /\!/$$

$1{,}60 - 0{,}06$

b) $$P_{10} = 1{,}60 + \frac{\frac{0{,}40}{100} - 16}{10} \cdot 0{,}10$$

$$1{,}60 + \frac{\frac{40}{100} - 16}{10} \cdot 0{,}10$$

$$1{,}60 + \frac{4 - 16}{10} \cdot 0{,}10$$

$$\boxed{1{,}60 - 0{,}12}$$

$$\boxed{P_{10} = 1{,}48}\; /\!/$$

C) $D_6 = 1,60 + \dfrac{\frac{6,40 - 16}{10}}{10} \cdot 0,10$

$1,60 + \dfrac{2,4 - 16}{10} \cdot 0,10$

$1,60 + 0,08$

$\boxed{D_6 = 1,68}$

D) $A_s = \dfrac{Q_1 + Q_3 - 2\,md}{Q_3 - Q_1}$ $\qquad \begin{array}{l} Q_1 = 1,54 \\ Q_3 = 1,74 \\ md = 1,64 \end{array}$

$Q_3 = 1,60 + \dfrac{\frac{3,40}{4} - 16}{10} \cdot 0,10$

$1,60 + \dfrac{14}{10} \cdot 0,10$

$Q_3 = 160 + 0,14 = \boxed{Q_3 = 1,74}$

$md = 1,60 + \dfrac{\frac{40}{2} - 16}{10} \cdot 0,10$

$1,60 + \boxed{\dfrac{4}{10} \cdot 0,10}\,0,04$ $\qquad md = 1,64$

$A_s = \dfrac{1,54 + 1,74 - 2(1,64)}{1,74 - 1,54} = \dfrac{3,28 - 3,28}{0,2}$

$\boxed{A_s = \dfrac{0}{0,2} \quad \Rightarrow \quad \text{Simétrica}}$

e) $K = \dfrac{Q_3 - Q_1}{2(P_{90} - P_{10})}$

$Q_1 = 1,54$
$Q_3 = 1,74$
$P_{10} = 1,48$
$P_{90} = 1,80$

$P_{90} = 1,60 + \dfrac{\overset{90.40}{\dfrac{160}{-16}} - 16}{10} \cdot 0,10$

$1,60 + \dfrac{20}{10} \cdot 0,10$

$1,60 + 0,2 = P_{90} = 1,80$

$K = \dfrac{1,74 - 1,54}{2(1,80 - 1,48)} = \dfrac{0,2}{2(0,32)} = \dfrac{0,2}{0,64} = 0,3125$

$\boxed{K = 0,3125} > 0,263 \to$ Platicurtina

$2-$ $\quad X_{10}$ $(5,5)(6,4)$ $(4,6)$ $\frac{3}{36}$

$\quad\quad X_{12}$ $(5,6)(6,5)$ $\frac{2}{36}$

$\quad\quad X_{12}$ $(6,6)$ $\frac{1}{36}$

a) Valor medio

$$E(X) \quad 10 \cdot \frac{3}{36} + 11 \cdot \frac{2}{36} + 12 \cdot \frac{1}{36}$$

$$E(X) = \frac{30}{36} + \frac{22}{36} + \frac{12}{36} = \frac{64}{36} \approx 1,8 \boxed{\approx 2}$$

b) $Var(X) = (10-2)^2 \cdot \frac{3}{36} + (11-2)^2 \cdot \frac{2}{36} + (12-2)^2 \cdot \frac{1}{36}$

$$Var(x) = 64 \cdot \frac{3}{36} + 81 \cdot \frac{3}{36} + 100 \cdot \frac{1}{36}$$

$$Var(x) = 192/36 + 162/36 + 100/36 = 454/36 \boxed{\approx 13}$$

c) $DP = \sqrt{Var}$

$$DP = \sqrt{13} \approx 3,6 \boxed{\approx 4}$$

$\boxed{3 = C}$ $\qquad$ $\boxed{4 = D}$