Chips 1 = $\frac{468}{20}$ = 23,4

Chips 2 = $\frac{299}{16}$ = 18,69

Chips 3 = $\frac{387}{20}$ = 19,35

Chips 4 = $\frac{500}{17}$ = 29,41

Média

Chip 1 =	19	20	22	23	24	25	26	27
	1	3	3	1	4	5	2	1

Moda 25

Chip 2 =	14	16	17	18	19	20	21	22
	1	2	3	1	1	4	3	1

Moda 20

Chip 3 =	13	14	16	18	19	20	21	22	23	24	28	12
	1	1	2	4	1	2	2	2	1	2	1	1

Moda 18

Chip 4 =	21	25	26	27	29	30	31	32	33
	1	1	1	1	3	3	2	3	2

Moda 29, 30, 32

Chipa 1=

19 | 20 | 20 | 20 | 22 | 22 | 22 | 23 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 25 | 25 | 26 | 26 | 27

$Me = \frac{24+24}{2} = \frac{48}{2} = \boxed{24}$

— " —

Chipa 2=

19 | 16 | 16 | 17 | 17 | 17 | 18 | 19 | 20 | 20 | 20 | 20 | 21 | 21 | 21 | 22

$Me = \frac{19+20}{2} = \frac{39}{2} = \boxed{19,5}$

— " —

Chipa 3=

12 | 13 | 14 | 16 | 16 | 18 | 18 | 18 | 19 | 20 | 20 | 21 | 21 | 22 | 22 | 23 | 24 | 24 | 28

$Me = \frac{19+20}{2} = \frac{39}{2} = \boxed{19,5}$

— " —

Chipa 4=

21 | 25 | 26 | 27 | 29 | 29 | 29 | 30 | 30 | 30 | 31 | 32 | 32 | 32 | 33 | 33 | 33

$Me = \boxed{30}$

$$\text{var}(1) = \frac{(22-23,4)^2 + (22-23,4)^2 + (26-23,4)^2 + (24-23,4)^2 + (23-23,4)^2 + (27-23,4)^2 + (25-23,4)^2 + (20-23,4)^2 + (24-23,4)^2 + (26-23,4)^2 + (25-23,4)^2 + (25-23,4)^2 + (19-23,4)^2 + (24-23,4)^2 + (20-23,4)^2 + (22-23,4)^2 + (24-23,4)^2 + (25-23,4)^2 + (25-23,4)^2 + (20-23,4)^2}{19}$$

$$\text{var}(1) = \frac{1,96 + 1,96 + 6,76 + 0,36 + 0,16 + 12,96 + 2,56 + 11,56 + 0,36 + 6,76 + 2,56 + 2,56 + 19,36 + 0,36 + 11,56 + 1,96 + 0,36 + 2,56 + 2,56 + 11,56}{19}$$

$$\text{var}(1) = \frac{100,2}{19} = \boxed{5,30}$$

— II —

$$\text{var}(2) = \frac{(21-18,69)^2 + (20-18,69)^2 + (16-18,69)^2 + (17-18,69)^2 + (16-18,69)^2 + (17-18,69)^2 + (20-18,69)^2 + (22-18,69)^2 + (14-18,69)^2 + (20-18,69)^2 + (19-18,69)^2 + (17-18,69)^2 + (20-18,69)^2 + (21-18,69)^2 + (21-18,69)^2 + (18-18,69)^2}{15}$$

$$\text{var}(2) = \frac{5,33 + 1,71 + 7,23 + 2,85 + 7,23 + 2,85 + 1,71 + 10,95 + 21,99 + 1,71 + 0,96 + 2,85 + 1,71 + 5,33 + 5,33 + 0,47}{15}$$

$$\text{var}(2) = \frac{80,21}{15} = \boxed{5,34}$$

$$\text{Var}(3) = \frac{(13-19,35)^2 + (24-19,35)^2 + (18-19,35)^2 + (16-19,35)^2 + (21-19,35)^2 + (20-19,35)^2 + (14-19,35)^2 + (20-19,35)^2 + (18-19,35)^2 + (12-19,35)^2 + (24-19,35)^2 + (23-19,35)^2 + (28-19,35)^2 + (18-19,35)^2 + (11-19,35)^2 + (19-19,35)^2 + (22-19,35)^2 + (21-19,35)^2 + (22-19,35)^2 + (16-19,35)^2}{19}$$

$$\text{Var}(3) = \frac{40,32 + 21,62 + 1,82 + 11,22 + 2,72 + 0,42 + 28,62 + 0,42 + 1,82 + 54,024 + 21,62 + 13,32 + 74,82 + 1,82 + 1,82 + 0,12 + 7,02 + 2,72 + 7,02 + 11,22}{19}$$

$$\text{Var}(3) = \frac{304,5}{19} = \boxed{16,02}$$

//

$$\text{Var}(4) = \frac{(29-29,41)^2 + (21-29,41)^2 + (25-29,41)^2 + (32-29,41)^2 + (27-29,41)^2 + (31-29,41)^2 + (30-29,41)^2 + (29-29,41)^2 + (31-29,41)^2 + (26-29,41)^2 + (32-29,41)^2 + (33-29,41)^2 + (32-29,41)^2 + (30-29,41)^2 + (33-29,41)^2 + (29-29,41)^2 + (30-29,41)^2}{16}$$

$$\text{Var}(4) = \frac{0,16 + 70,72 + 19,44 + 6,70 + 5,10 + 2,52 + 0,34 + 0,16 + 2,52 + 11,62 + 6,70 + 12,88 + 6,70 + 0,34 + 12,88 + 0,16 + 0,34}{16}$$

$$\text{Var}(4) = \frac{162,98}{16} = \boxed{10,18}$$

$dp(1) = \sqrt{5,30} = \boxed{2,302}$

$dp(2) = \sqrt{5,34} = \boxed{2,310}$

$dp(3) = \sqrt{16,02} = \boxed{4,002}$

$dp(4) = \sqrt{10,18} = \boxed{3,190}$