Assign. 01.

⑤ x_0 - real value

Δx - abs. error

$$E_r[\%] = \frac{|\Delta x|}{x_0} \cdot 100 = 100 \cdot 0{,}018 = 1{,}8\ \%$$

⑥ $r_r = \frac{1}{100}\left(\frac{1}{\text{counts}}\right)$ for a digital multimeter with 2 digits displayed

~~FS~~ = 20

$$r_a = \frac{20}{100} = 0{,}2 \quad \left(\frac{FS}{I_{max}} - FS\ rr\right)$$

⑨ $P = UJ = RJ^2$

$$P = (13 \pm 0{,}5)(3 \pm 0{,}1)^2 = (13 \pm 0{,}5)(9{,}01 \pm 0{,}6)$$

$$P = 13 \cdot 9{,}01 \pm 0{,}6\ 13 \pm 0{,}5 \cdot 9{,}01 \pm 0{,}6 \cdot 0{,}5$$

$$P = 0{,}3 + 117{,}13 \pm 4{,}50 \pm 7{,}8$$

$$P = 117{,}43 \pm 12{,}3$$

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$P = 13 \; 9{,}01 \pm 0{,}6 \; 13 \pm 0{,}5 \cdot 9{,}01 \pm 0{,}6 \cdot 0{,}5$ ⇒

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$P = 117{,}43 \pm 12{,}3$

⑮ $z = \frac{(x-\mu)}{\sigma} = \frac{110-100}{15} = 0{,}6$

where x is score, μ is mean, σ is standard

⑯ $P(1 < z < 2)$ — pers $P(a < z < b) = F(b) - F(a)$

$\Rightarrow F(2) - F(1) =$

$0{,}9772 - 0{,}8413$

$= 0{,}1359$

(17) $F(-x) = 1 - F(x)$ cdf cum. data from the table

$P(-0,45 < Z < 2,11) = F(2,11) - F(-0,45)$

$= F(2,11) - F(1 - F(0,45))$

$= 0,9826 - (1 - 0,67)$

$= 0,6562$

(19) $P(-z_* < z < z_*) \geq 98$ (%)

$P(z < z_*) - P(z < -z_*)$

$= P(z < z_*) - [1 - P(z < z_*)]$

$\Rightarrow 2P(z < z_*) - 1 = 0,98$

$\Rightarrow P(z < z_*) = \frac{1}{2}(1 + 0,98) \simeq 0,99$

$\Rightarrow$ The interval: $(-0,99, 0,99)$