1. 1-1
2. 2-1
3. 3-1
4. 4-1
5. 5-1
6. 6-1
7. 7-1
8. 8-1
9. 9-1
10. 10-1
11.

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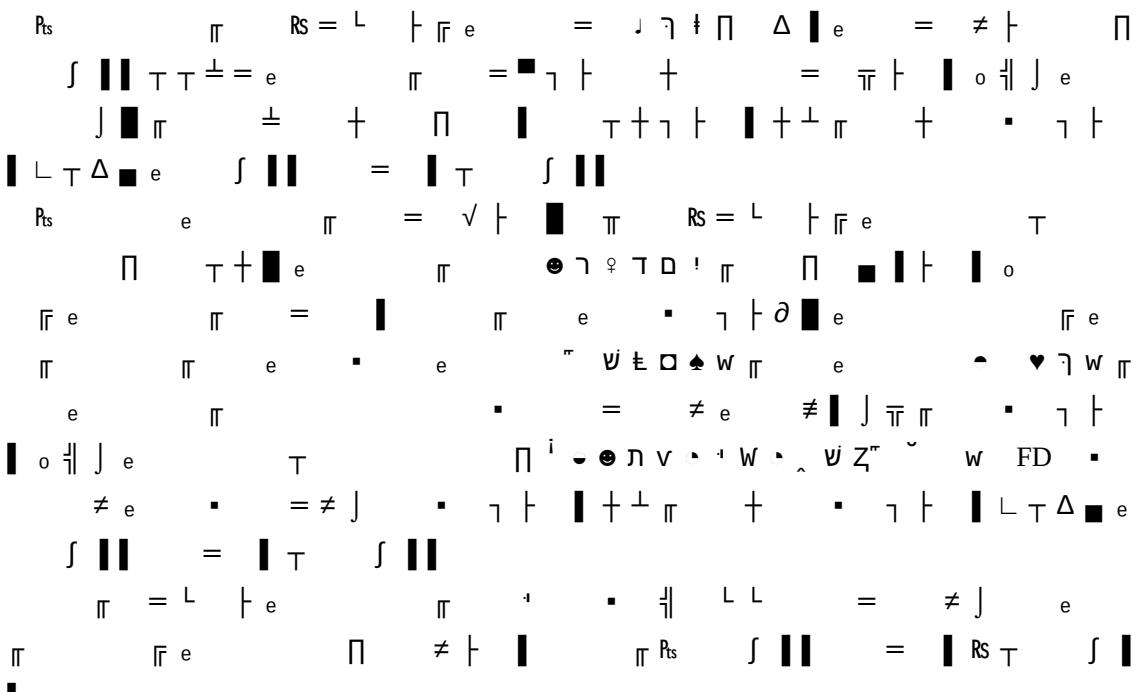

2.

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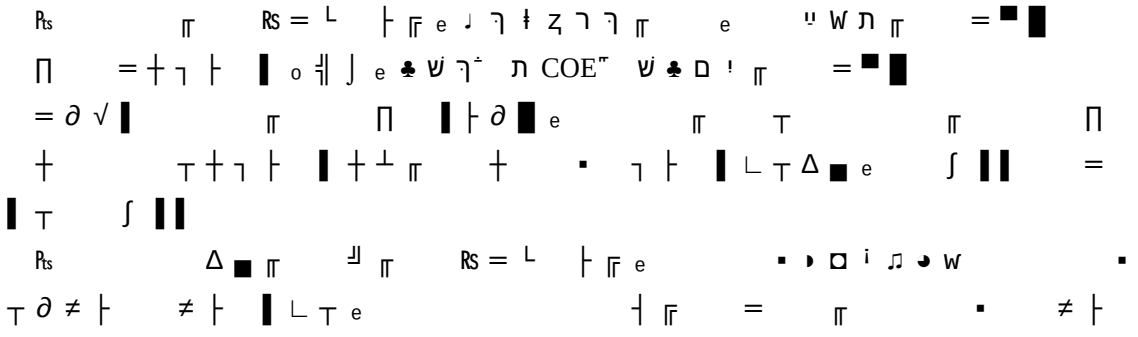

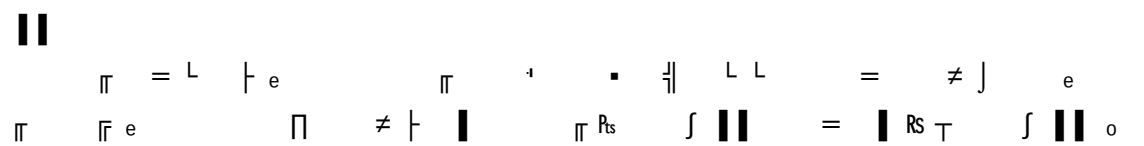

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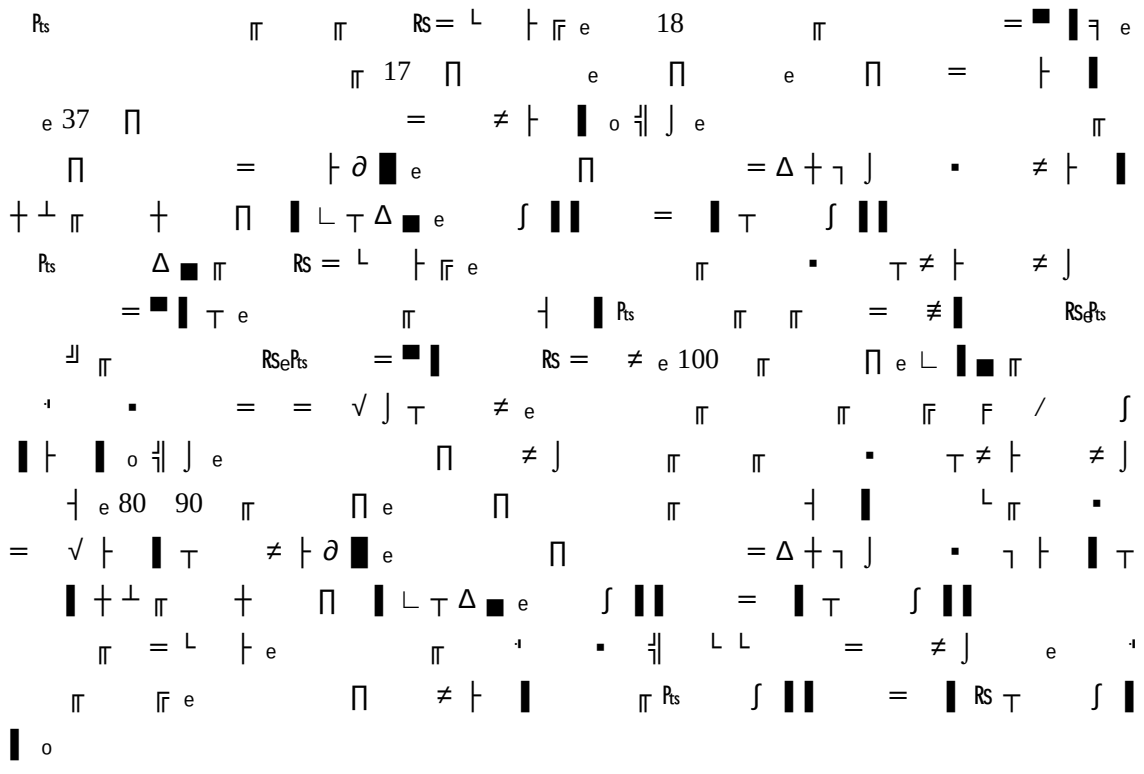

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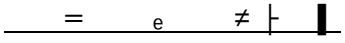

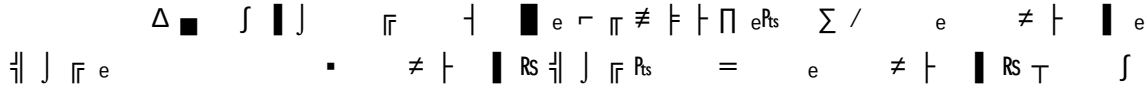

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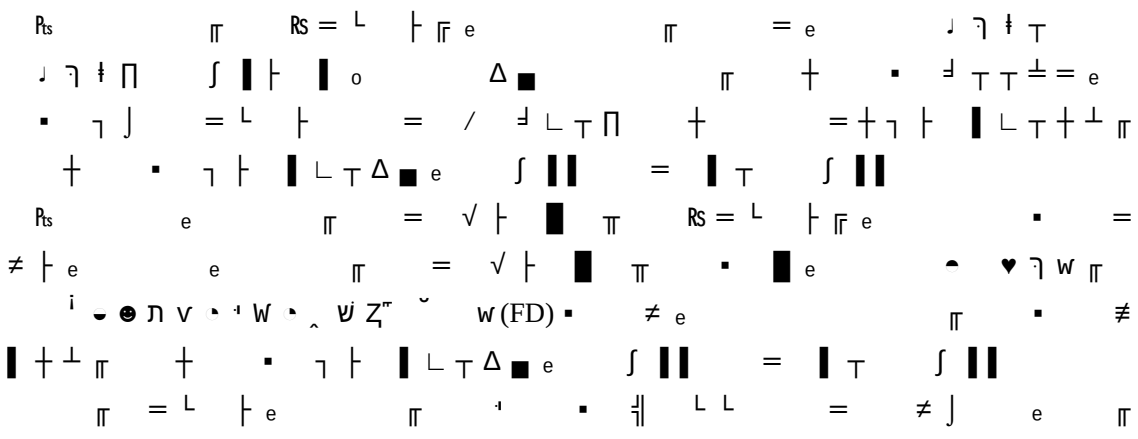
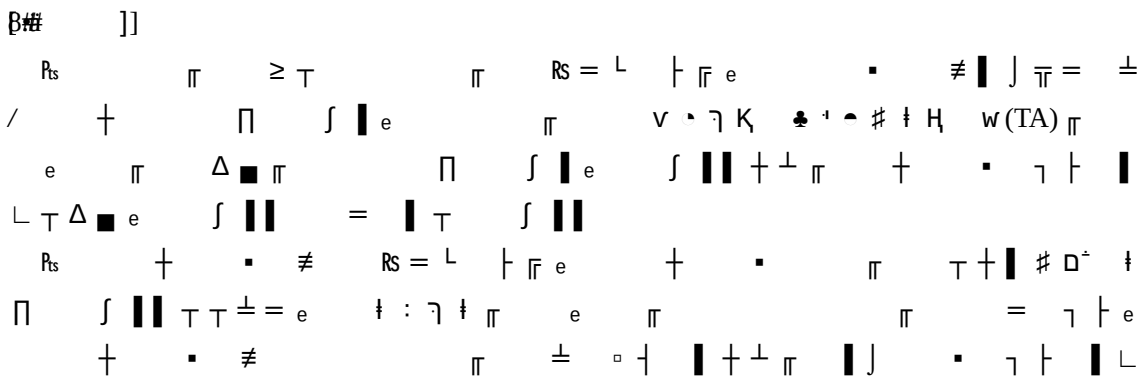


3.



[ ]

Pts ╥ ╥ RS = └ ├ ╔ e = ≠ ▌ ∏ ≠ ┬ ∂ ▌ e

╥ 25 ∏ = ≠ e 60 ∏ e ·╵ = ≠

├ ∂ ▌ e ╥ ∏ ≠ ∏ ∫ ▌ ├ ▌ ┼ ┴ ╥ ┼ ∏ ▌ └ ┬ Δ ■ e

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Pts Δ ■ ╥ RS = └ ├ ╔ e ⌐ ╥ ▪ ┬ ≠ ⌡ Δ ■ e

╥ ∏ = ■ ≠ ├ ∂ ∂ ╥ ╒ ▪ ∞ ├ ▌ ┼ ┴ ╥ ┼ ∏ ▌ └

┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

╥ = └ ├ e ╥ ·╵ ▪ ╣ └ └ = ≠ ⌡ e ·╵

╥ ╔ e ∏ ≠ ├ ▌ ╥ Pts ∫ ▌▌ = ▌ RS ┬ ∫ ▌▌ o

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Δ ■ ∫ ▌ ⌡ ╔ ┤ ▌ e ⌐ ╥ ≠ ╞ ├ ∏ e Pts ∑ ⁄ e ≠ ├ ▌ e

╣ ⌡ ╔ e ▪ ≠ ├ ▌ RS ╣ ⌡ ╔ Pts = e ≠ ├ ▌ RS ┬ ∫

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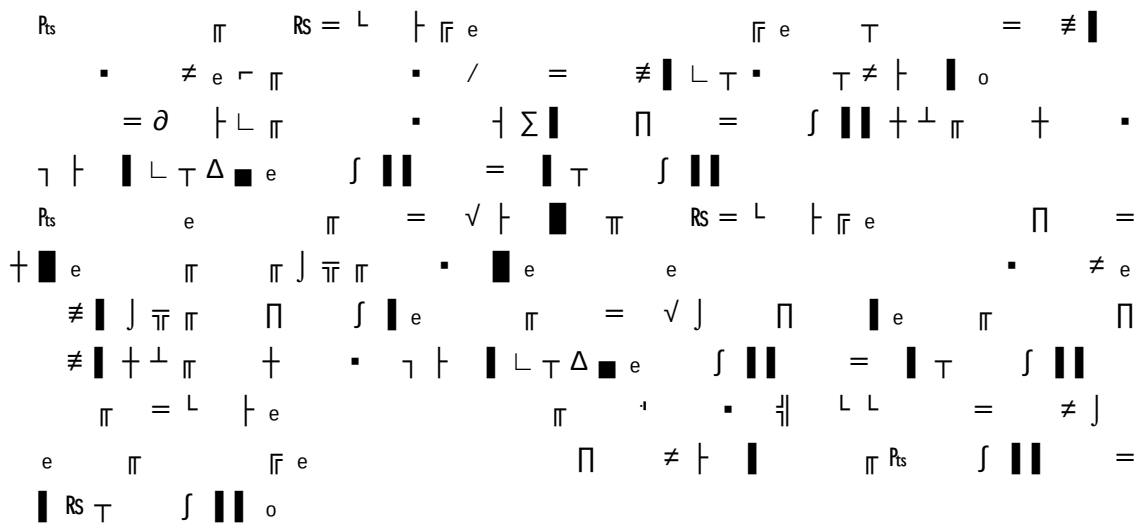

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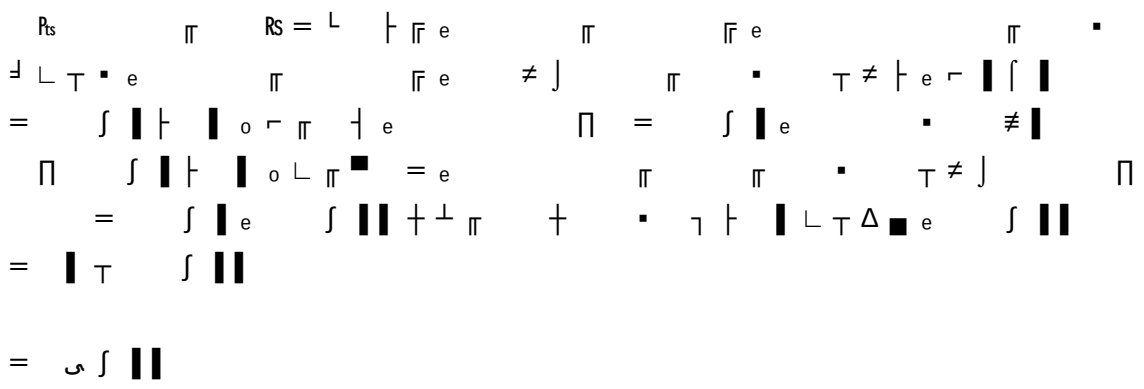

e ╔ e ∏ ≠ ├ ▌ ╓ ℞ ∫ ▌▌ = ▌ ℝ
⊤ ∫ ▌▌ o

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╓ = └ ├ e ╓ ⁴ ▪ ╣ └ └ = ≠ ⌡
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╓ ∏ = ▌ e = ∂ ├
± ╓ ∏ 16 e 17 e 18 e
19 ⊤ ≠ ├ ▌ o ╓ ▪ ≠ ▌ ±
∫ ▌ e ≠ ▌ ┼ ┴ ╓ ┼ ∏ ▌ └ ⊤ Δ ■ e ∫ ▌▌ = ▌ ⊤ ∫ ▌▌
℞ ╓ = ≠ ▌ ╓ ℝ = └ ├ ╔ e = ■ ▌ ╓ ▪
⊤ ≠ ⌡ Δ ■ e ╓ = ≠ ▌ ┼ ∏ ■ ▌▌ ┼ ┴ ╓ ┼
∏ ▌ └ ⊤ Δ ■ e ∫ ▌▌ = ▌ ⊤ ∫ ▌▌
╓ = └ ├ e ╓ ⁴ ▪ ╣ └ └ = ≠ ⌡

e ╥ ╒e ∏ ≠ ├ ▌ ╥ ℞ ∫ ▌▌ = ▌ ℟ ┬ ∫ ▌▌ o

5.

∫ ▌▌ = ▌

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℞ ╥ ╥ ℟ = └ ├ ╒e ╥ ∏ ≢ ╥ ∏ ∫ ▌e = ▉ ∫ ▌▌ ┼ ┴ ╥ ┼ ∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

℞ Δ ■ ╥ ℟ = └ ├ ╒e ⌐ ╥ ▪ ┬ ≠ ⌡ Δ ■ e ╥ ∏ = ■ ≠ ▪ ∞ ▌ ┼ ┴ ╥ ┼ ∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

╥ = └ ├ e ╥ ⁻¹ ▪ ╣ └ └ = ≠ ⌡ e ⁻¹ ╥ ╒e ∏ ≠ ├ ▌ ╥ ℞ ∫ ▌▌ = ▌ ℟ ┬ ∫ ▌▌ o

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╒ e ∏ ≠ ├ ▌ ╥ ₧ ∫ ▌▌ = ▌ ₨ ┬ ∫ ▌▌ o

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₧ ╥ ≥ ┬ ╥ ₨ = └ ├ ╒ e = ■ ▌ ▪ ≠
⌡ ╥ ▪ / ≠ e 2 ╥ 90 ∏ = ≠ ├ ▌ o v ▸ ┐ Ķ
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┴ ╥ ┼ ▪ ┐ ├ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌
₧ ┼ ▪ ≠ ₨ = └ ├ ╒ e ╥ ╥ ≠ e ╥
= ■ ▌ e ╥ ▪ ≠ ▌ ╠ Δ e ⁱ ◘ ł v ▸ ± ת = ∂ ├ ₧ ╤ ┴ Ɽ v
┐ ♯ ↄ ╵ ♩ v ł w ₨ ▪ ≠ e = ┼ ╥ ╥ ▪ ▌ ┼ ┴ ╥ ┼
▪ ┐ ├ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌
╥ = └ ├ e ╥ ╵ ▪ ╣ └ └ = ≠ ⌡ e
╒ e ∏ ≠ ├ ▌ ╥ ₧ ∫ ▌▌ = ▌ ₨ ┬ ∫ ▌▌ o

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₧ ∏ = √ ⌡ ╵ ₨ = └ ├ ╒ e ┼ ╥ e 18
= ∂ ├ ╒ ┤ ╥ ∏ 79.5 ┤ ▌ ┼ ┴ ╥ ┼ ∏ ▌ └ ┬ Δ ■ e
∫ ▌▌ = ▌ ┬ ∫ ▌▌
₧ ╥ = ≠ ▌ ╥ ₨ = └ ├ ╒ e = ≠ ├ e ∂ ■
= ◓ ♥ ┐ w ▪ e ╥ = ≠ ├ ± = ≠ ▌ ▪
┐ ├ e ╥ ╥ = ╤ ├ ▌ o ╥ ₧ ₨ ╒ e ╥
┬ ╥ ∏ ≤ ≠ ± ┤ ╒ ┼ ∏ e 70 ╥ ∏ ⌐ ╥ ┬ ≠ ⌡ ∏ = └
⌡ ┬ ≠ ▌ ┼ ┴ ╥ ┼ ∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌
╥ = └ ├ e ╥ ╵ ▪ ╣ └ └ = ≠ ⌡ e ╥
╒ e ∏ ≠ ├ ▌ ╥ ₧ ∫ ▌▌ = ▌ ₨ ┬ ∫ ▌▌ o

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Pts ╥ ╥ RS = └ ├ ╔ e 18 ╥ 54 ╔ ■ = ▌ ∏ e 14 e ∫ ■ = e ∏ 29 ┬ ╔ ePts ·╵ = ∂ √ ▌ ·╵ ▪ ≠ ▌ └ ┬ RS ▪ = ∞ ├ ▌ └ ┬ ┬ ╥ ┤ ╔ e ╥ ▪ ∞ ├ ▌ ┬ ▌ ┼ ┴ ╥ ┼ ∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

Pts Δ ■ ╥ RS = └ ├ ╔ ePts = ╥ RS ┬ Pts ┬ ▪ ╥ RS ┬ ∏ = ⌡ ┬ ≠ ▌ ∏ ⌐ ▌ ⌠ ▌ 90 e 70 = ╡ o ╥ ▪ ┬ ≠ ⌡ ┤ ≟ e ♫ ⁻ ת ∏ ┼ ≟ ╥ ╥ e 80 ∏ ⌐ ▌ ■ ╥ ∏ ├ ▌ ┬ ╥ ▪ ≠ ▌ ┼ ┴ ╥ ▌ ⌡ ∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ ▪ ▌ ┬ ∫ ▌▌ ╥ = └ ├ e ╥ ·╵ ▪ ╣ └ └ = ≠ ⌡ e ·╵ ╥ ╔ e ∏ ≠ ├ ▌ ╥ Pts ∫ ▌▌ = ▌ RS ┬ ∫ ▌▌ o

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Δ ■ ∫ ▌ ⌡ ╔ ┤ ▌ e ⌐ ╥ ≠ ╞ ├ ∏ ePts ∑ ⁄ e ≠ ├ ▌ e ╣ ⌡ ╔ e ▪ ≠ ├ ▌ RS ╣ ⌡ ╔ Pts = e ≠ ├ ▌ RS ┬ ∫ ▌ ⌡ o

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╒ e ∏ ≠ ├ ▌ ╥ ₧ ∫ ▌▌ ▪ ▌ ₨ ┬ ∫ ▌▌ o

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₧ ╥ ≥ ┬ ╥ ₨ = └ ├ ╒ e ┤ 153 ▪ ≠ ├
▌ e = ■ ▌ ▪ 22 ├ ▌ ╠ Δ e e ╥ ╓ ₩ ♣ ◘ !
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w TA e ┐ ♫ ┐ Ķ ┴ ◓ # ┤ Ң w RA ▪ ≠ ⌡ ┼ ┴ e ┼
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∫ ▌▌ ▪ ▌ ┬ ∫ ▌▌
₧ ┼ ▪ ≠ ₨ = └ ├ ╒ e ╥ ╝ ╥ ▪ ╥
= ≠ e / ╥ ╥ ▪ ├ ▌ o ╥ ▌ ◕ ┤ # ◓ v ◝
ⁱ ▪ = ≠ ├ e ╥ ▪ ≠ ▌ ┼ ┴ ╥ ┼ ▪ ┐ ├ ▌ └
┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌
╥ = └ ├ e ╥ ┴ ▪ ╣ └ └ = ≠ ⌡ e
╒ e ∏ ≠ ├ ▌ ╥ ₧ ∫ ▌▌ = ▌ ₨ ┬ ∫ ▌▌ o

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₧ ∏ = √ ⌡ ┴ ₨ = └ ├ ╒ e ┤ ╥ ╒ e
∏ 82.1 e ┤ 7.7 ┬ ┼ ┐ ├ ▌ o ╣ ⌡ e = ■ ▌
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₧ ╥ = ≠ ▌ ╥ ₨ = └ ├ ╒ e 18 ╥ ╥ e
= ∞ ⌡ └ ╥ ∏ ▌ ⌡ ┬ ≠ ⌡ ∏ ╥ = ≠ ▌ ┼ ┴ ╥ ┼
∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌
╥ = └ ├ e ╥ ┴ ▪ ╣ └ └ = ≠ ⌡ e
╥ ╒ e ∏ ≠ ├ ▌ ╥ ₧ ∫ ▌▌ = ▌ ₨ ┬ ∫ ▌▌ o

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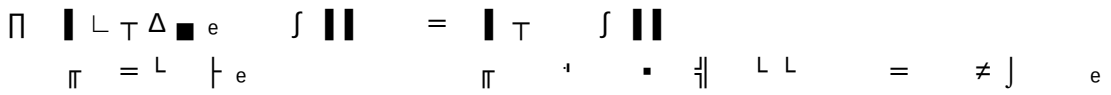

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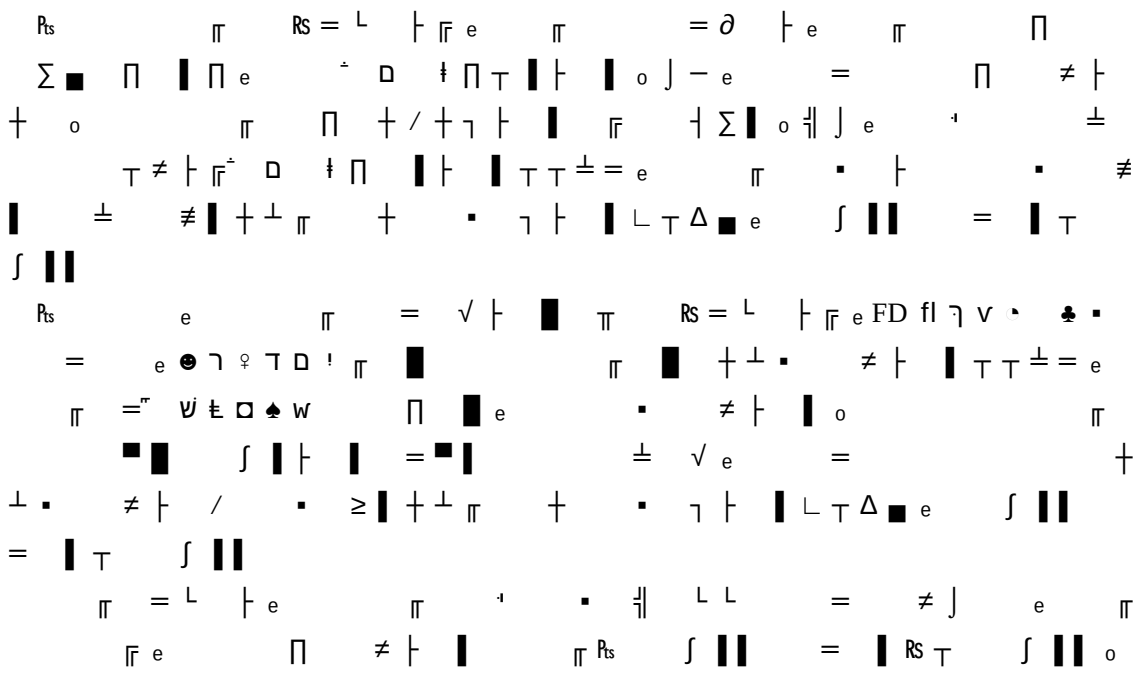

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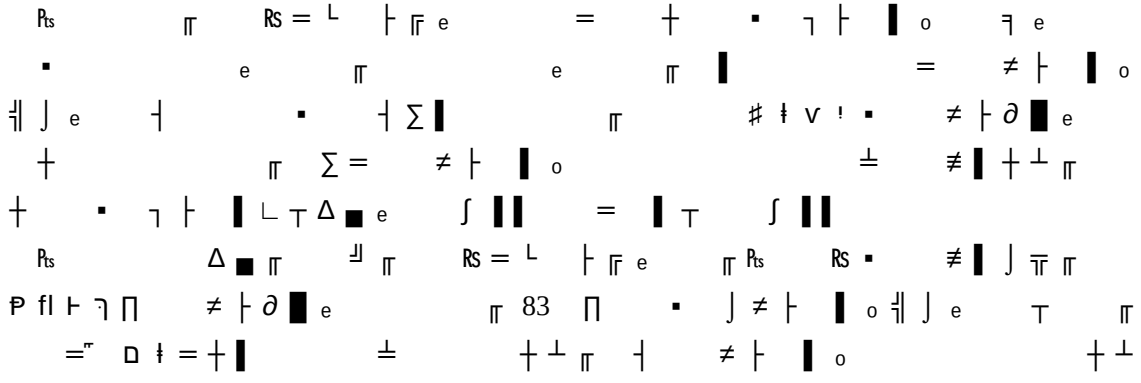

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⌡♥◓=■▌e ▪ = √├ ≠▌ ≐ 87 ⊤ ┼┴╥ ┼
∏ ▌└⊤Δ■e ∫▌▌ = ▌⊤ ∫▌▌

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├ ▌ o 18 ╓ ┤ ╔ ePts RS ┬ Pts RS ┬
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RS ∏ ▌⌡ ┬ ≠ ⌡ ∏ ≢▌ ┼ ┴ ╓ ┼ ∏ ▌ └ ┬ Δ ■ e
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╔ e ∏ ≠ ├ ▌ ╓ Pts ∫ ▌▌ = ▌ RS ┬ ∫ ▌▌ o

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Pts ╓ ╓ RS = └ ├ ╔ e 18 ╓ ╓ 72 ∏ =
≠ ├ ▌ o ⌐ ╓ ╓ ╔ ∂ ■ ┼ ┴ ┤ ▌ o ╓ ∏
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▌ o ▪ ┬ ≠ ⌡ ┤ ≐ ePts RS ┬ Pts RS
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■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌
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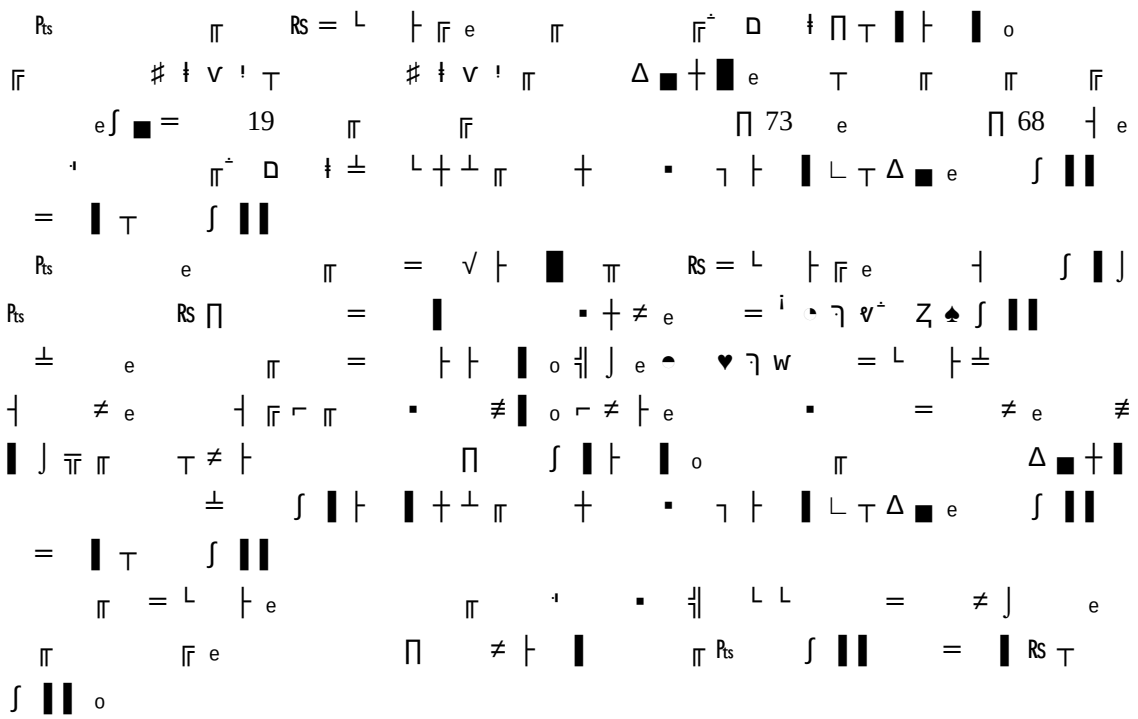
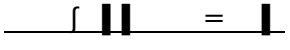
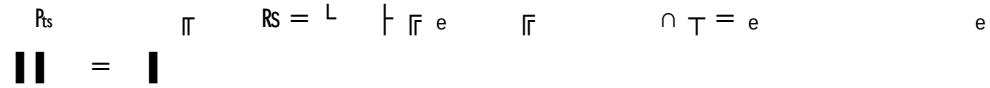


2.



[ ]



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Pts ╓ ≥ ┬ ╓ RS = └ ├ ╒ e ┤ ╒ e

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Pts ∏ = √ ⌡ ⁻¹ RS = └ ├ ╔ e ┬ ▪ ≠ ▌ ┬ ┬ ┴ = e ┤ ╔ ╥ e ┤ ╔ ╥ ╝ √ ├ ≠ ├ ▌ o ┤ ╥ ╔ 20 40 ┤ ▐ e = ≠ ▌ ┬ ╠ ┤ 10 ╥ ▪ ≠ ▌ ┼ ┴ ╥ ┼ ∏ ▐ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

Pts ╥ = ≠ ▌ ╥ RS = └ ├ ╔ e 18 ╥ = ■ ▌ ┬ ≠ ⌡ 26 ╥ ╥ | Pts RS ┬ Pts RS ╥ ┬ = └ ├ e ⌐ ▐ ⌠ ▌ 19 e 22 ∏ ⌐ ▐ ■ ╥ ⁻¹ ∏ = ⌡ ┬ ≠ ├ ▐ ┼ ┴ ╥ ┼ ∏ ▐ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

╥ = └ ├ e ╥ ⁻¹ ▪ ╣ └ └ = ≠ ⌡ e ╥ ╔ e ∏ ≠ ├ ▌ ╥ Pts ∫ ▌▌ = ▌ RS ┬ ∫ ▌ ▌ o

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Pts ╥ ╥ RS = └ ├ ╔ e 18 ╥ ╥ 34 ╥ | 12 ∏ = ▐ e ╔ ┤ ▐ o ╔ ┼ ┴ ┤ ▐ o ╥ ╥ | ∏ ╥ ▪ e ∏ = ▐ e ∏ = ┼ ┐ ├ ▐ o = ∂ √ ▌ ╥ ∏ ∂ ∂ ╥ ┣ ┤ ▐ ┼ ┴ ╥ ┼ ∏ ▐ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

Pts Δ ■ ╥ RS = └ ├ ╔ e 18 ╥ ╥ ◓ ♥ ┐ w = ■ ▌ ╕ Pts RS ∏ Pts = └ ⌡ RS ╣ ⌡ ╔ Pts ┴ | ■ Δ ┬ ┬ = ⌡ RS ┬ ╔ 79 ┤ ▐ Pts RS ╔ ≡ / 88 ┤ ▐ ┼ ┴ ╥ ┼ ∏ ▐ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

╥ = └ ├ e ╥ ⁻¹ ▪ ╣ └ └ = ≠ ⌡ e ⁻¹ ╥ ╔ e ∏ ≠ ├ ▌ ╥ Pts ∫ ▌▌ = ▌ RS ┬ ∫ ▌▌ o

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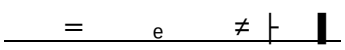

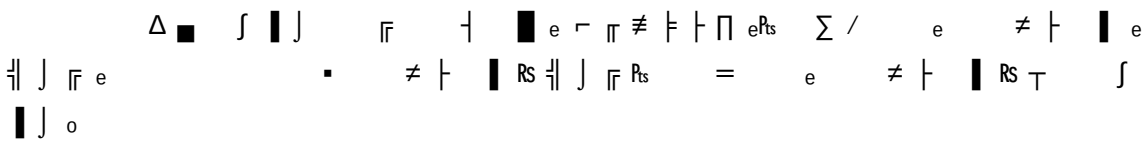

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Pts ╔ ≥ ┬ ╔ RS = └ ├ ╔ e =

┐ ∨ ▪ ≠ e ∏ Δ ▌ ■ = ≠ ├ ▌ ╠ Δ e 30 ╔ ∏

╔ 50 ┼ ▌ ┼ ┴ ╔ ┼ ▪ ┐ ├ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫

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Pts ┼ ▪ ≠ RS = └ ├ ╔ e = ▌ ⌡ ╔

▪ ≠ ▌ ╠ Δ e ╔ ◓ ♥ ┐ w ▪ = e ╔ ☻ ┐ ♀ ┴ ◘ ! ╔ ≠ ▪ ≠ e

▪ Δ ■ ≠ ▌ ┼ ┴ ╔ ╔ = ∏ ┼ ∫ ▌ ├ ▌ ┼ ┴ ╔

┼ ▪ ┐ ├ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

╔ = └ ├ e ╔ ∙ ▪ ╣ └ └ = ≠ ⌡ e

╔ e ∏ ≠ ├ ▌ ╔ Pts ∫ ▌▌ = ▌ RS ┬ ∫ ▌▌ o

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Pts ∏ = √ ⌡ ∙ RS = └ ├ ╔ e 16 Δ ■ 19 ╔

╔ ∏ 81 91 ┤ ▌ └ ┬ ╔ ╠ Δ e ◓ ♥ ┐ w = ■ ▌ ╕ e 02 ∙

03 ▪ / = └ ├ ╔ 50 ∏ = ┐ ⌡ ┬ ≠ ├ ▌ ┼ ┴ ╔ ┼

∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

Pts ╔ = ≠ ▌ ╔ RS = └ ├ ╔ e 19 ▪ ┬ ≠ ⌡

= ■ ▌ ┬ e ╔ ∏ = ⌡ ┬ ╔ ∏ 62 ┤ ▌ ┼ ┴ ╔

┼ ∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

╔ = └ ├ e ╔ ∙ ▪ ╣ └ └ = ≠ ⌡ e

╔ ╔ e ∏ ≠ ├ ▌ ╔ Pts ∫ ▌▌ = ▌ RS ┬ ∫ ▌

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Pts ╥ ╥ RS = └ ├ ╔ e ╝ ╥ ╔ 30 ┤ ▌ └ ┬ e
= ≠ ⌡ ╝ ╥ ╔ 30 50 ▪ ╦ ├ ▌ ┼ ┴ ╥ ┼ ∏ ▌ └ ┬ Δ ■ e
∫ ▌▌ = ▌ ┬ ∫ ▌▌

Pts Δ ■ ╥ RS = └ ├ ╔ e ╥ ▪ ┬ ≠ ⌡ ◓ ♥ ┐ w =
■ ▌ ╕ e ╥ ▪ = = √ ⌡ ┬ ╥ ∏ 78 ┤ ▌ ┼ ┴
╥ ┼ ∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌
╥ = └ ├ e ╥ ▫ ▪ ╣ └ └ = ≠ ⌡ e
▫ ╥ ╔ e ∏ ≠ ├ ▌ ╥ Pts ∫ ▌▌ = ▌ RS ┬
∫ ▌▌ o

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╣ ⌡ ╔ e ▪ ≠ ├ ▌ RS ╣ ⌡ ╔ Pts = e ≠ ├ ▌ RS ┬ ∫
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╔ e ∏ ≠ ├ ▌ ╥ ₧ ∫ ▌▌ = ▌ ₨ ┬ ∫ ▌▌ o

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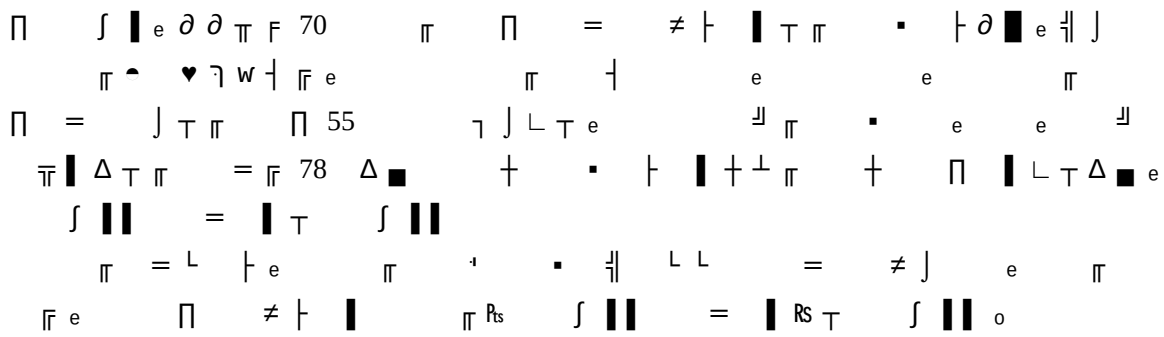
₧ ╥ ≥ ┬ ╥ ₨ = └ ├ ╔ e e e e ╥
╥ ╨ D ╞ e ╥ ╨ D ╞ ∏ = ∫ ▌ e ┬ = └ ├
╔ ∏ ∫ ▌ e v ▸ ╕ K╖ ♣ ╡ ◓ ♯ ╞ H╖ w TA ▪ ≠ ├ ∑ ╦ Δ



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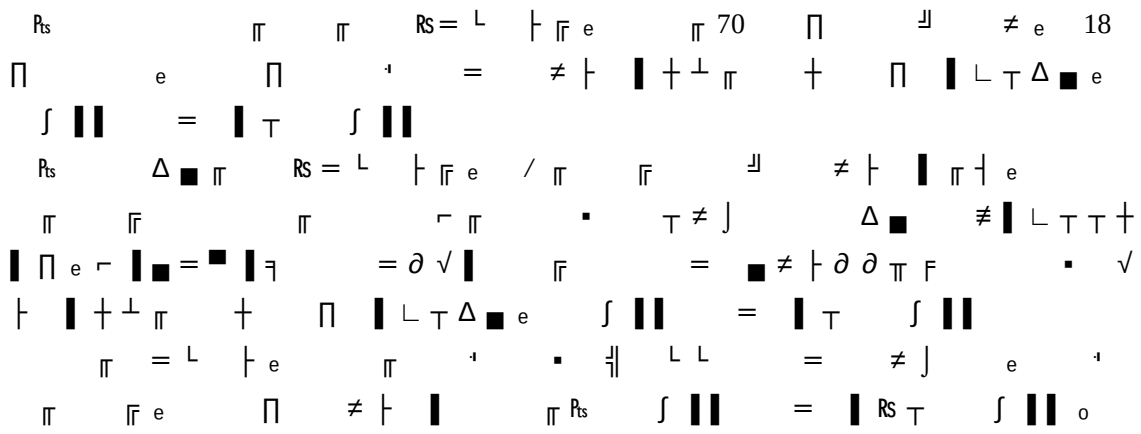

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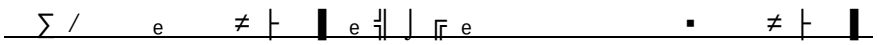

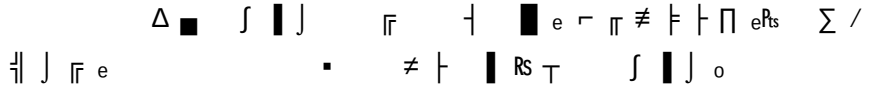

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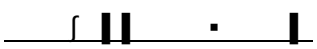

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Pts ╥ RS = └ ├ ╒ e ▪ ♯ ǂ v ! ╥ ▪ ┬ ≠ ⌡ e e ╥ ┤ ∫ ▌e 134 e 43 19 ┤ ∫ ▌e e e ╥ = ∂ ├ └ ╥ 21 COE ¯ ẅ ♣ ◘ ! ▪ ≠ ├ ∑ ├ ∂ ▉ e ╒ ┤ ▉ e ╥ ╥ ╥ ╤ ▌ ∏ 63 ┤ ▌ ┼ ┴ ╥ ≛ ≠ ├ ∂ ▉ e ╥ ∏ ┤ ∑ ├ ▌ ┼ ┴ ╥ ▌⌡ ▪ ┐ ├ ▌ └ ┬ Δ ▄ e ∫ ▌ ▌ ▪ ▌ ┬ ∫ ▌▌

Pts e ╥ = √ ├ ▉ ╥ RS = └ ├ ╒ e e e ∏ = ▪ ▉ ┼ ∏ ▄ e ╥ ▪ ╤ ├ ∂ ▉ e ◓ ♥ ┐ w ▪ e ⌐ ▌ ▪ ☻ ┐ ♀ ㄱ ◘ ! = ∫ ≥ e ╣ ⌡ e ▪ ≠ e ▪ ⏐ ∞ ▌ ┼ ┴ ╥ ╥ ▪ ∏ = ≢ ▌ ▪ ≠ ├ ▌ ┼ ┴ ╥ ▌⌡ ▪ ┐ ├ ▌ └ ┬ Δ ▄ e ∫ ▌▌ ▪ ▌ ┬ ∫ ▌▌

╥ = └ ├ e ╥ ▪ ╣ └ └ = ≠ ⌡ e ╥ ╒ e ∏ ≠ ├ ▌ ╥ Pts ∫ ▌▌ ▪ ▌ RS ┬ ∫ ▌▌ o

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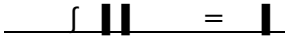

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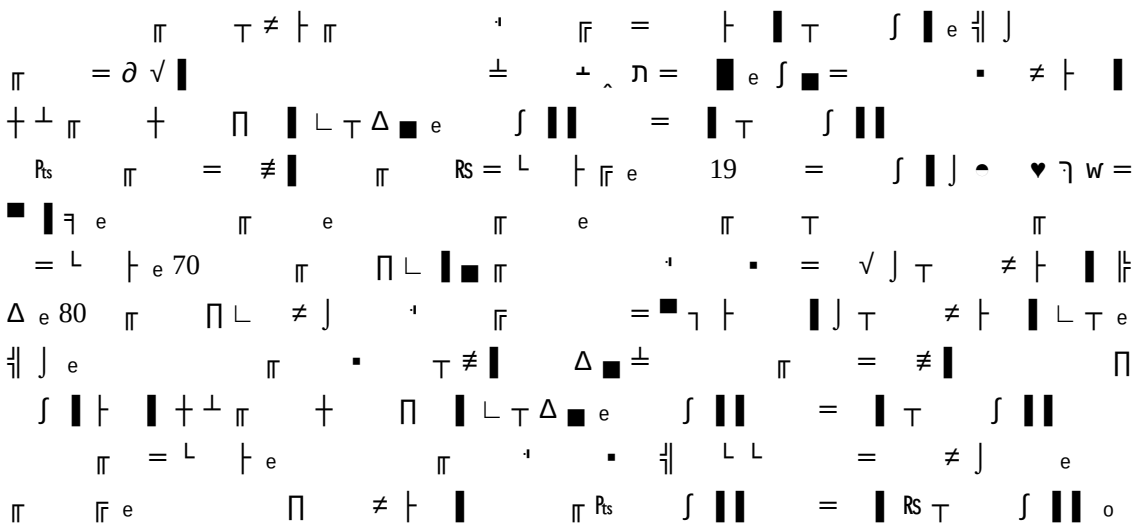
Pts ╥ RS = └ ├ ╒ e ▪ ≠ ▌ = ┼ ∏ ⌟ ┐ ǂ ϛ ┐ ┐ = ┐ ├ ∫ ▌ ├ ∂ ▉ e = ▀ ▌ ╥ ╒ e ╥ ┼ = ▀ ▉ ∫ ▌ ├ ▌ ┼ ┴ ╥ ┼ ▪ ┐ ├ ▌ └ ┬ Δ ▄ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

Pts Δ ▄ ╥ ╜ ╥ RS = └ ├ ╒ e = ∂ √ ▌ ╥ ╒ ◗ ◘ i ♫ ◕ w ┤ ∫ ▌ ├ ∂ ▉ e ╥ = ≠ ⌡ ┬ ≠ ├ e



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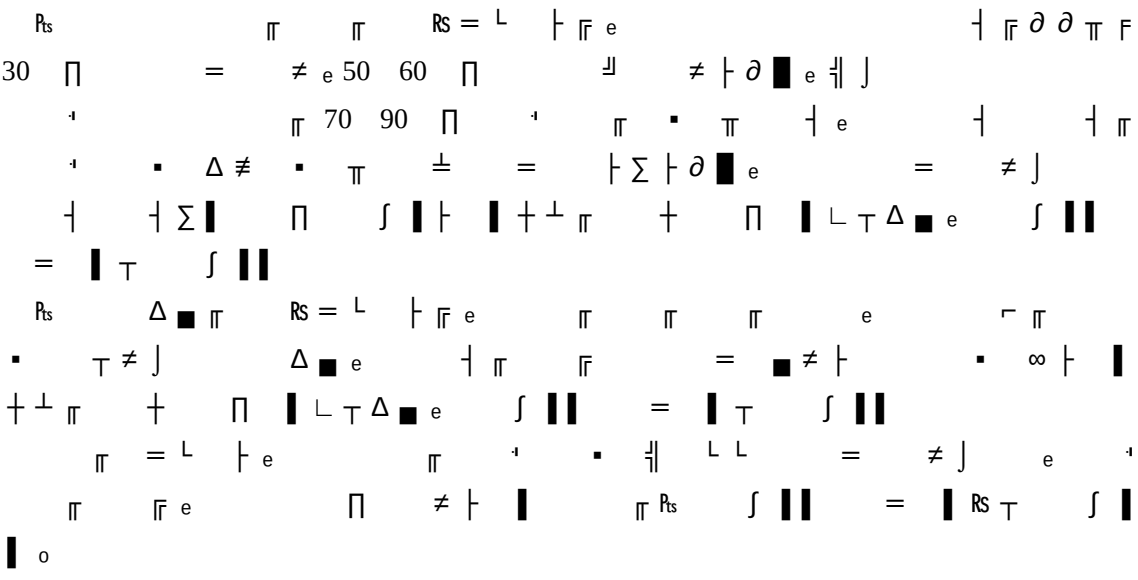

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⊢ ┐ ┤ ╥ = ╔ ∏ Δ ■ ∫ ▌ e ┤ ╞ 320 e 5,765 ╥

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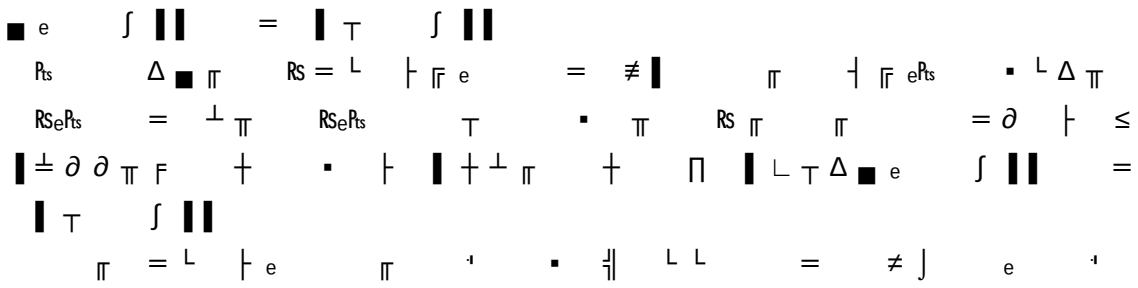

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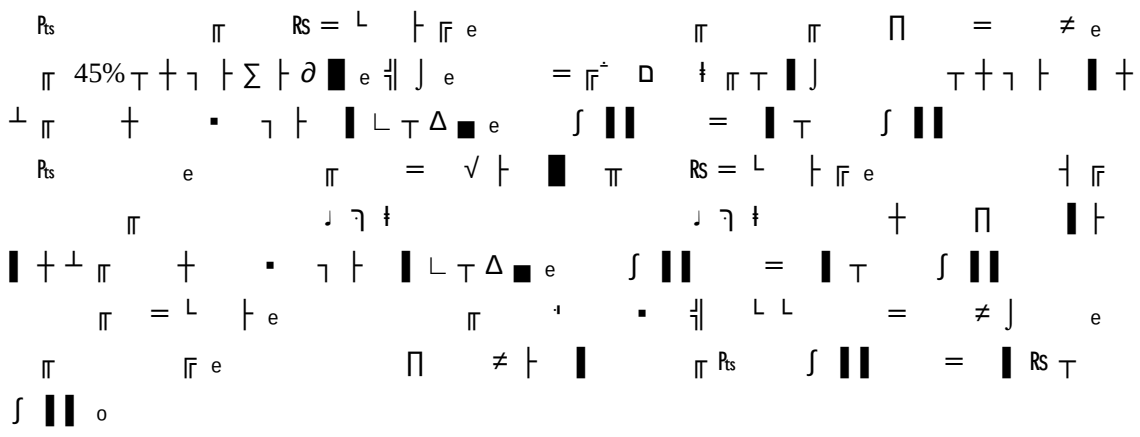

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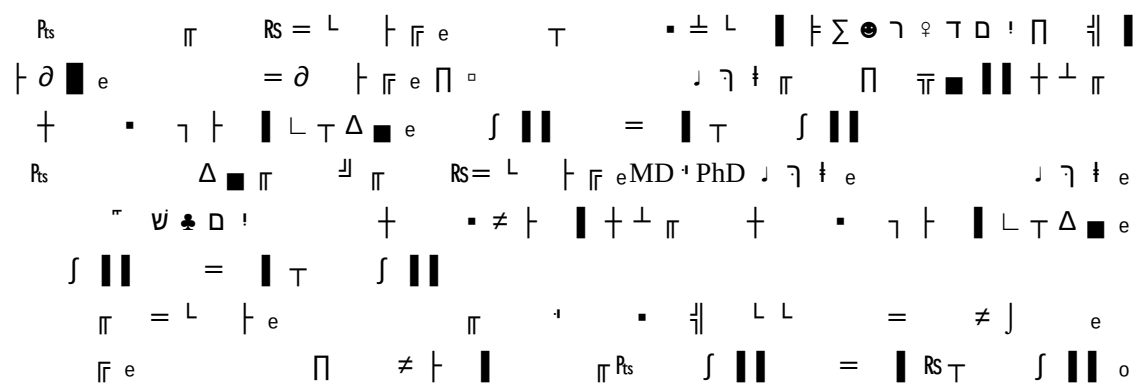

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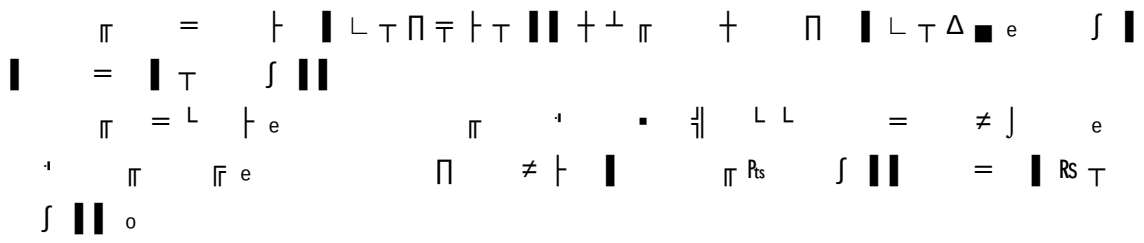

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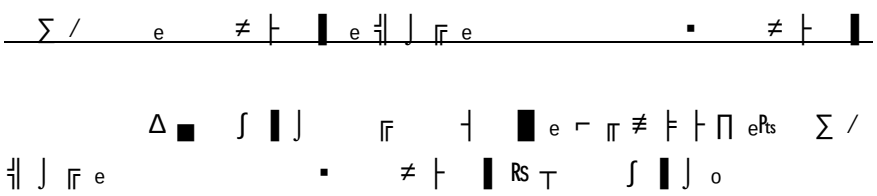

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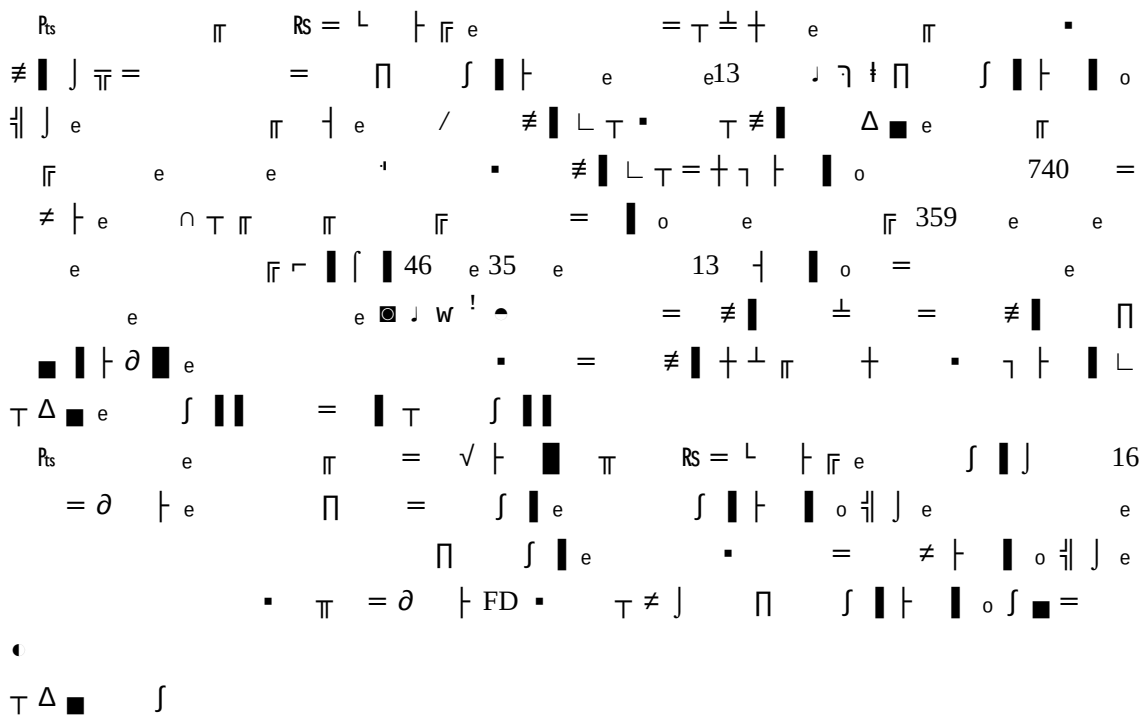

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┼ ▪ ┐ ├ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌
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Pts ∏ = √ ⌡ ·ı RS = └ ├ ╔ e ∏ ▪ ≠ ▌ ⌡ ╦
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91 ▪ ≠ ├ ▌ o └ ▌ ╔ = ┐ ⌡ ╔ ▪ = ≠ ├ ▌
└ ┬ ╔ √ ┤ ▌ o ╣ ⌡ e ∏ ≠ ▌ Δ ▄ ▪ √ ▌ ┼ ┴ ╔ ▐ ⌡
∏ ▐ └ ┬ Δ ▄ e ∫ ▌▌ ▪ ▐ ┬ ∫ ▌▌
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╔ e ∩ ┬ ╔ 15 = ⌡ ▌ ╔ ◓ ♥ ┐ w ▪ e 16
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▐ ∏ e ╔ 80 ∏ = ≠ e ▐ 10 ∏ e = ≠ ▌ ┼
┴ ╔ ▐ ⌡ ∏ ▐ └ ┬ Δ ▄ e ∫ ▌▌ ▪ ▐ ┬ ∫ ▌▌
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Pts ╥ ╥ RS = └ ├ ╔ e ╥ ▪
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╔ e = 45 e = 25 ∏ ≠ ├ ▌ o ≤ ▌ ± ⁄ ╥ = ⌡
▌ ≠ ├ ▌ ┼ ┴ ╥ ┼ ∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌
Pts Δ ■ ╥ RS = └ ├ ╔ e ⁄ = ≠ ├ e
╥ ┬ = ┐ ⌡ ◓ ♥ ┐ w Δ ■ ePts ⁄ ╥ ╥ ∫ RS ▪ ≠
▌ ┬ e 25 ╥ ∏ Pts ∏ ▌ RS ┬ ≠ ▌ e ┤ ╔ 3.6 ┬ e ≠ ┬ ┼ ┐
├ ▌ o e e ∂ ■ ⁄ = ≠ ▌ ◓ ♥ ┐ w ┤ ╔ e ╥
╔ 80 ▌ ∏ e ╥ ⌐ ▌ ╔ 20 30 ┬ = ≠ o ┬ └ ▒ ∏ e
19 = ≠ ▌ Pts ╥ e ⁄ ╥ ∏
= └ ⌡ Δ RS ┬ ◓ ♥ ┐ w ╔ e ⌐ ▌ ⌠ ▌ ╥ ┤ 87.2 e 67.3 e 60.3 ┬
┼ ∏ o ╥ e ⁄ = └ ├ ╥ ╥ ╔ e ∂
∂ ╥ F ┤ ▌ ∏ e e ⁄ ╔ e = ╞ ├ e ⌐ ▌ ⌠ ▌ 31.8 e
24.2 ┬ o ∫ ■ = ePts ╔ ∏ ≠ ▌ ▪ ⌡ ≠ ├ ▌ Δ RS ╥
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⌡ ┼ ∏ e = ▌ ┬ ┼ ∏ ⁄ ┼ ┐ ├ ▌ ┼ ┴ ╥ ┼ ∏ ▌ └
┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌
╥ = └ ├ e ╥ ⁄ ▪ ╣ └ └ = ≠ ⌡ e ⁄
╥ ╔ e ∏ ≠ ├ ▌ ╥ Pts ∫ ▌▌ = ▌ RS ┬ ∫ ▌
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Pts ╓ RS = └ ├ ╒ e Ᵽ Ꮒ ┐ ∏ ▪ ≠ ▌

▪ ≠ ▌ ┬ ┴ ═ e 18 Δ ■ ╒ e ┬ ╓ = ▌ ⌡

╤ e ╣ ⌡ ╓ ‾ ẇ ♣ ◘ ¡ ╓ ⌡ ╤ = Δ ■ ╝ ╓ ╓ ≠ ∏

■ ▌ ├ ▌ ┼ ┴ ╓ ┼ ▪ ┐ ├ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌

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Pts e ╓ = √ ├ ▐ ╥ RS = └ ├ ╒ e ┬

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╒ e ∏ ≠ ├ ▌ ╓ Pts ∫ ▌▌ = ▌ RS ┬ ∫ ▌▌ o

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▪ ≠ ▌ ∏ = ∫ ▌ ├ ▌ ┼ ┴ ╓ ┼ ▪ ┐ ├ ▌ └ ┬

Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

Pts Δ ■ ╓ ╝ ╓ RS = └ ├ ╒ e e e ┤ ╓

e ╣ ⌡ e ▪ √ ├ ∂ ▐ e ◓ ♥ ┐ w ▪ ≠ = ▐ ▫ ┤

▌ └ ┬ e ╝ ╓ ◓ ♥ ┐ w ▪ ≠ = ╓ ▪ ╧ ∞ ▌ ▪ ┐

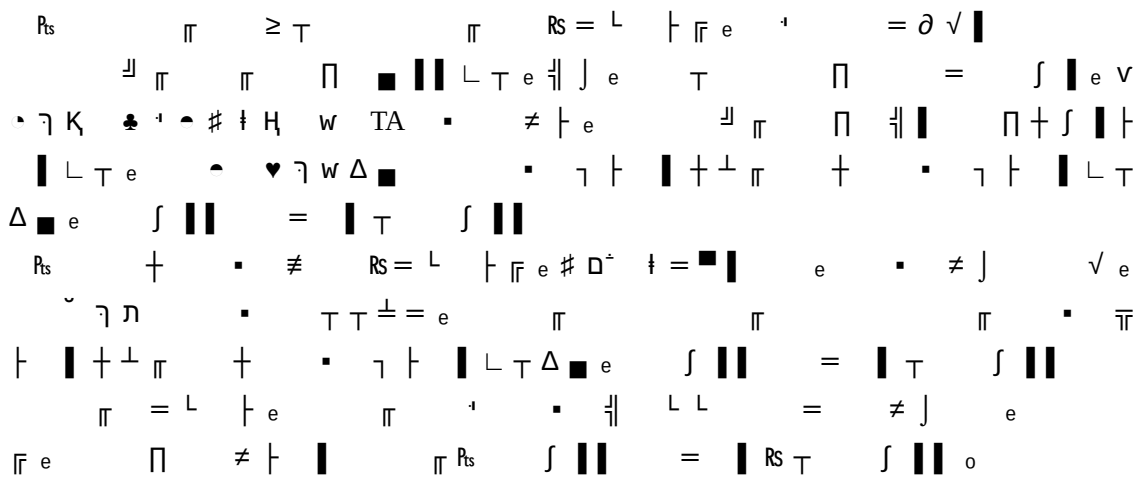
├ ▌ ┼ ┴ ╓ ┼ ▪ ┐ ├ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

╓ = └ ├ e ╓ ˈ ▪ ╣ └ └ = ≠ ⌡ e

╒ e ∏ ≠ ├ ▌ ╓ Pts ∫ ▌▌ = ▌ RS ┬ ∫ ▌▌ o

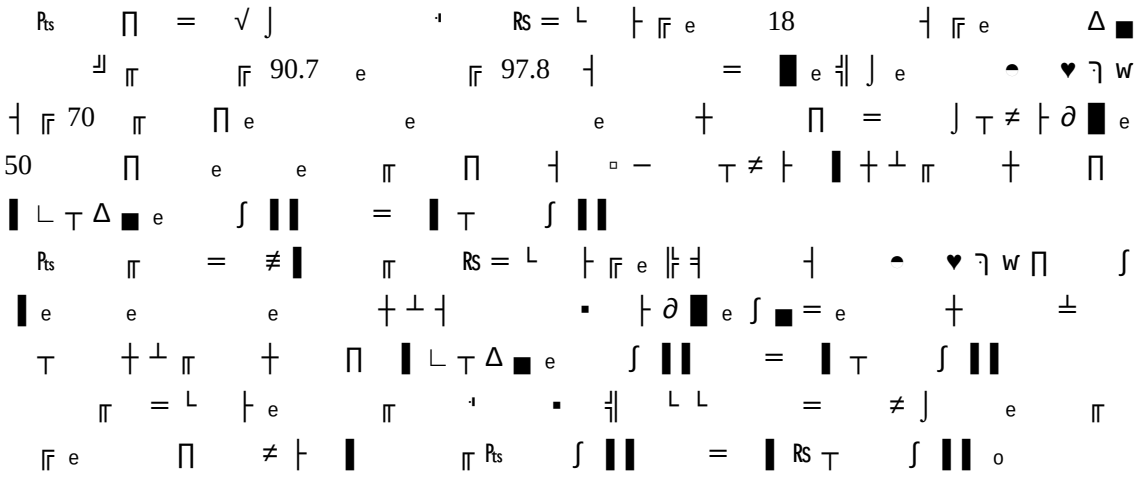
3.

[ ]



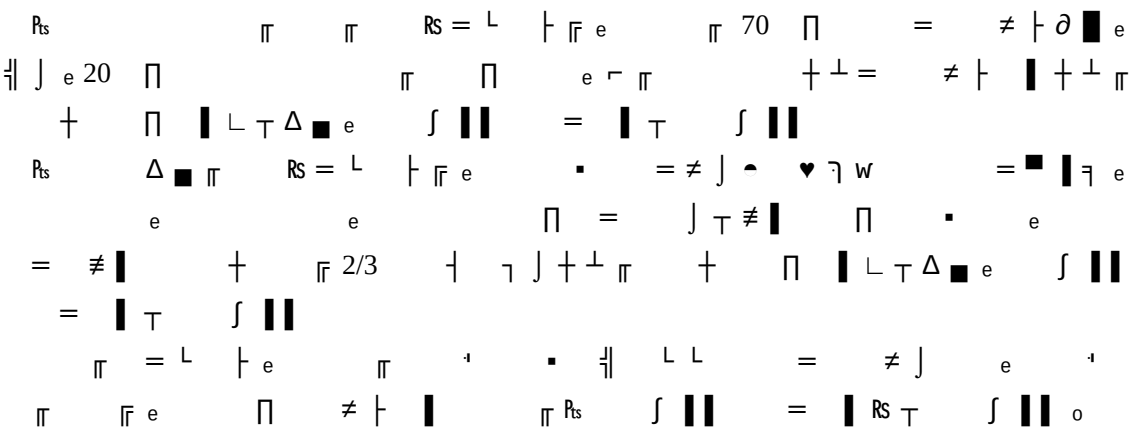
4.

[ ]



5.

[ ]



II

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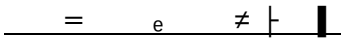
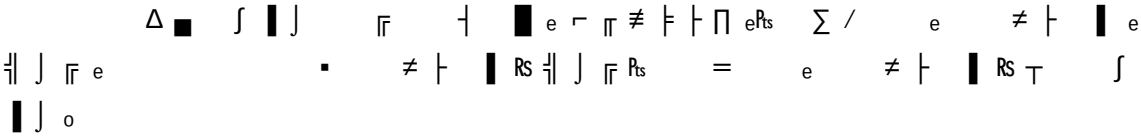
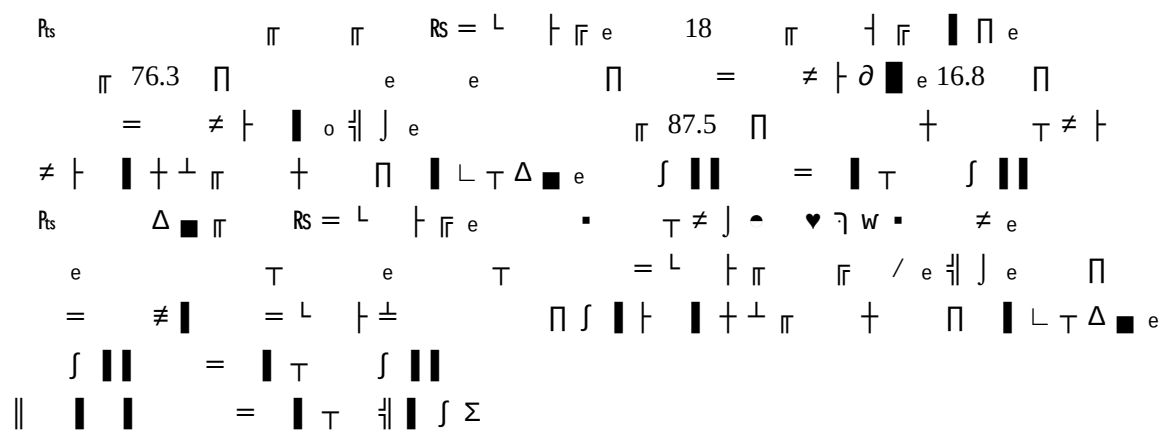




5.

[ ]



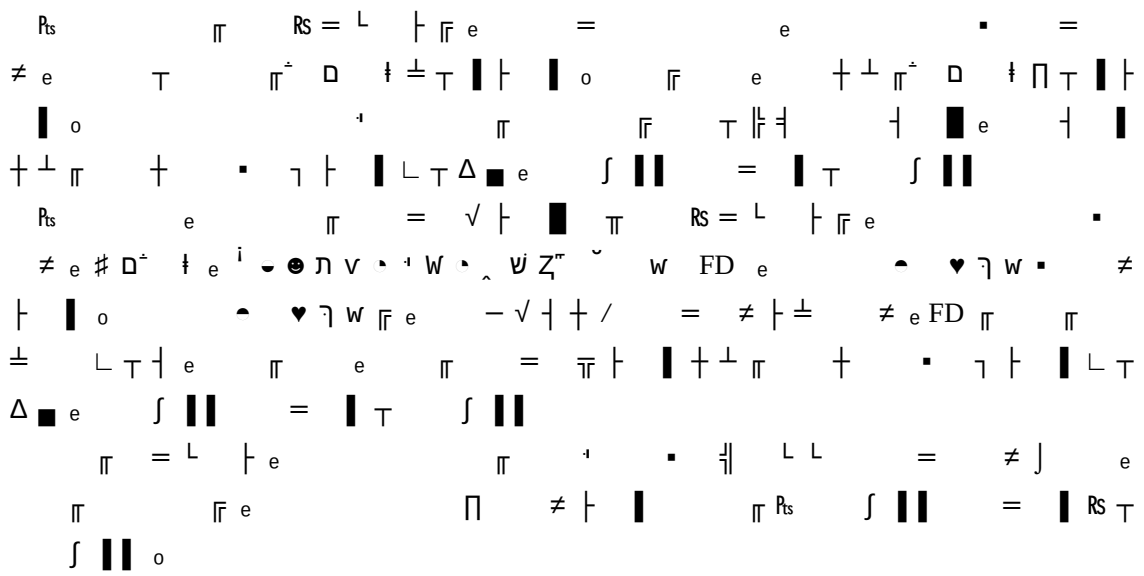
..... 19-2

..... 19-4

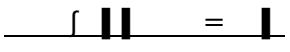
I

1.

[ ]

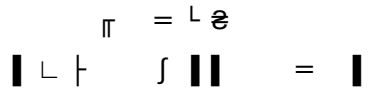


2.



[ ]

p



3.

_____ ∫ ▌▌ = ▌

[ ]

Pts ╔ ≥ ┬ ╔ RS = └ ├ ╔ e ⁱ ▪ ┐ ת ∀ ┐ ♠ ▪ ╔

e ╔ = ■ ▌ ╔ e v ▪ ┐ K, ♣ ˡ ◓ # ł H, w TA ╔ ┼ ┴ ▪

┐ ├ ▌ ┼ ┴ ╔ ┼ ▪ ┐ ├ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

Pts ┼ ▪ ≠ RS = └ ├ ╔ e ˡ = ≠ ▌ ∏ ▐ e

┐ ♠ ◙ ł w ▪ √ e ╔ ▪ ≠ ├ ▌ ┼ ┴ ╔ ┼ ▪ ┐ ├ ▌ └

┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

╔ = └ ├ e ╔ ˡ ▪ ╣ └ └ = ≠ ⌡ e

╔ e ∏ ≠ ├ ▌ ╔ Pts ∫ ▌▌ = ▌ RS ┬ ∫

▌▌ o

4.

_____ ∫ ▌▌ = ▌

[ ]

Pts ∏ = √ ⌡ ˡ RS = └ ├ ╔ e ╔ ╔ 100 e

╔ 56.3 ┤ ▌ o ∫ ■ = e ╔ ╔ 42 e ╔ 39 e

╔ ┤ ▌ ┼ ┴ ╔ ┼ ∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

Pts ╔ = ≠ ▌ ╔ RS = └ ├ ╔ e = ≠ ├ ▌ = ■ ▌

◓ ♥ ┐ w ┤ ▪ ├ ▌ └ ┬ e ╔ ╝ ╔ ◓ ♥

┐ w ┤ ≟ ∏ ┼ ┴ ╔ ┼ ∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬

∫ ▌▌

╔ = └ ├ e ╔ ˡ ▪ ╣ └ └ = ≠ ⌡ e

╔ ╔ e ∏ ≠ ├ ▌ ╔ Pts ∫ ▌▌ = ▌ RS ┬

∫ ▌▌ o

5.

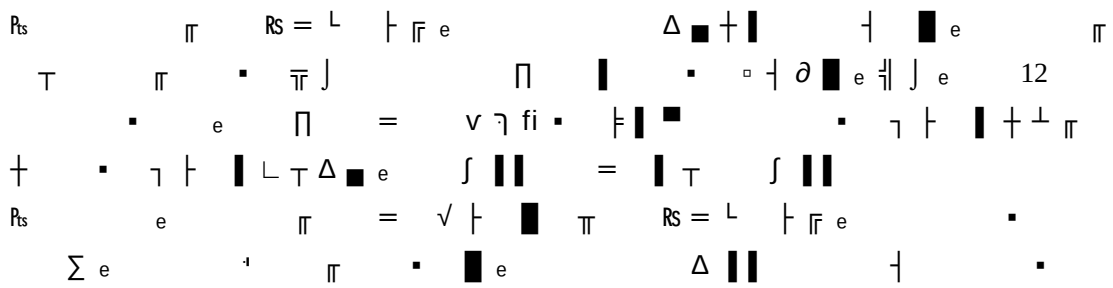
..... 20-2

..... 20-4

I

1.

[ ]



▌⊤ ∫ ▌▌

╥ = └ ├ e ╥ ╵ ▪ ╣ └ └ = ≠ ⌡

e ╓ e ∏ ≠ ├ ▌ ╥ ₧ ∫ ▌▌ = ▌ ₨

⊤ ∫ ▌▌ o

3.

∫ ▌▌ = ▌

[ ]

₧ ╥ ≥ ⊤ ╥ ₨ = └ ├ ╓ e ╥ e ⊤

♠ ◘ ⫲ ╥ ╥ ∓ ≥ ╵ ◘ ⫲ ∏ e = ┐ ├ ▌e = ∫

▌ ├ ▌ o ╣ ⌡ e ◓ ∀ ◕ ♬ ┐ ┼ ☺ ⁱ ◗ ⫲ ◓ ┐ = ± ∏ ∓ ▄ ▌▌ ┼ ┴ ╥

┼ ▪ ┐ ├ ▌ └ ┬ Δ ▄ e ∫ ▌▌ = ▌ ⊤ ∫ ▌▌

₧ ┼ ▪ ≠ ₨ = └ ├ ╓ e ☼ ◕ h ⫲ Δ ▄ ┼ ╥ ▪

≠ e ┼ ▪ ┐ ├ ∂ ▉ e = e ∏ ▄ ♣ ת ┐ ▪ ≠ ├ ╵ ▪ ₧

╕ ₩ Ł ◘ ♠ w ₨ ╓ ┤ ▉ e ╕ ₩ ♣ ◘ ! = ≠ ├ ▌

┼ ┴ ╥ ▌⌡ ▪ ┐ ├ ▌ └ ┬ Δ ▄ e ∫ ▌▌ ▪ ▌ ⊤ ∫ ▌▌

╥ = └ ├ e ╥ ╵ ▪ ╣ └ └ = ≠ ⌡

e ╓ e ∏ ≠ ├ ▌ ╥ ₧ ∫ ▌▌ = ▌ ₨

⊤ ∫ ▌▌ o

4.

∫ ▌▌ = ▌

[ ]

₧ ∏ = √ ⌡ ╵ ₨ = └ ├ ╓ e ∏ = √ ▌ ⊧ ∑ ╓

⊤ ≠ ├ ∫ ▌ ├ ∂ ▉ e = └ ├ ± ☼ ◕ ◓ ◘ ◕ v ⫲ w ┤ ┼

╵ ▪ ▄ Δ = ≠ ├ ▌ o ╥ ╵ ± ≠ ├ ∂ ▉ e ⌐ ▌ =

± ≠ ├ ▌ ┼ ┴ ╥ ┼ ∏ ▌ └ ┬ Δ ▄ e ∫ ▌▌ = ▌

⊤ ∫ ▌▌

₧ ╥ = ≢ ▌ ╥ ₨ = └ ├ ╓ e ◓ ♥ ┐ w ╓ ∂ ∂ ╥ ⊦ ▪

├ ▌ ⊤ ≠ ├ ∂ ▉ e ╥ ◓ ♥ ┐ w ┤ ⌐ ▌ ▪ ≢ ▌ └ ┬ ∏ ▌ o ╣

⌡ e ⁻ ₩ Ⱡ ◘ ♠ w = ≠ ▌ ╓ ╔ ┼ ┴ ╓ ┼ ∏ ▌ └ ┬ Δ ■ e
∫ ▌▌ = ▌ ┬ ∫ ▌▌

..... 21-2

..... 21-4

e ╔ e ∏ ≠ ├ ▌ ╓ ℞ ∫ ▌▌ = ▌ ℝ
⊤ ∫ ▌▌ o

3.

∫ ▌▌ = ▌

[ ]

℞ ╓ ≥ ⊤ ╓ ℝ = └ ├ ╔ e ⊤ ╓ ▪ ≠ ├
· · ▪ ∓ = ∓ ≥ e ┼ ∏ ∫ ▌▌ ⊤ ⊤ ≐ = e 15
╓ ≐ / ∫ ▌├ ▌┼┴╓ ┼ ▪ ┐├ ▌└⊤Δ■ e ∫ ▌▌
= ▌⊤ ∫ ▌▌

℞ ┼ ▪ ≠ ℝ = └ ├ ╔ e ♯ ◘ ÷ ⅈ ╓ ◗ ◘ ¡ ♫ ◕ w ┤ ╓ ∏
=┼┐├ ▌╠Δ e ∏ ☺ ¡ ◗ ⅈ ◓ ┐ ▪ √ ˘ ┐ ת ◓ ∀ ± ⅈ ▪ ≠ e ∫ ■
= ╓ ∏ ∫ ▌├ ▌┼┴╓ ┼ ▪ ┐├ ▌└⊤Δ■ e ∫
▌▌ = ▌⊤ ∫ ▌▌

╓ =└ ├ e ╓ · ▪ ╣ └└ = ≠ ⌡
e ╔ e ∏ ≠ ├ ▌ ╓ ℞ ∫ ▌▌ = ▌ ℝ
⊤ ∫ ▌▌ o

4.

∫ ▌▌ = ▌

[ ]

℞ ∏ = √ ⌡ · ℝ = └ ├ ╔ e 19 ╓ ╔ 49
e ╔ 15 e ╔ ⌐ ▌∫ ▌92 e 48 ⊤ ▪ ≠ ├ ▌┼┴╓
┼ ∏ ▌└⊤Δ■ e ∫ ▌▌ = ▌⊤ ∫ ▌▌

℞ ╓ = ≢▌ ╓ ℝ = └ ├ ╔ e 18 ╓ = ≢▌◓
♥ ┐ w 19 = ≢▌◓ ♥ ┐ w = ∂ ├ e 80 / ∏ ┤ ⌡
▪ = ├ ▌⊤╓ ▪ ├ ▌┼┴╓ ┼ ∏ ▌└⊤Δ■ e
∫ ▌▌ = ▌⊤ ∫ ▌▌

╓ =└ ├ e ╓ · ▪ ╣ └└ = ≠ ⌡

⊤ ∫ ▌▌ o

5.

∫ ▌▌ = ▌

[ ]

Pts ╥ ╥ RS = └ ├ ╔ e 18 = ∫ ▌ ⌡

50 = ≢ ▌ = ■ ▌ ┐ e 32 ∏ = e 38 ∏

= e ∏ = ├ ▌ o ╣ ⌡ e 27 ╥ ╔ ∏

e ∏ e 22 ∏ ╥ ⊤ ┼ ┐ ├ ▌ ┼ ┴ ╥ ┼ ∏

▌ └ ⊤ Δ ■ e ∫ ▌▌ = ▌ ⊤ ∫ ▌▌

Pts Δ ■ ╥ RS = └ ├ ╔ e ╥ ▪ ⊤ ≠ ├ ≠ ⌡

= ■ ▌ ⊤ e ╥ ┤ ▌ Pts = ≢ ▌ RSePts

= ≢ ▌ RSePts = ≢ ▌ RS = ≠ e 82.6 87.0 ╥

∏ e └ ▌ ■ ╥ ▪ = = └ √ ⌡ ⊤ ≠ e ╥

╥ ╔ F / ∫ ▌ ├ ▌ o ╣ ⌡ e ∏ ≠ ⌡ ╥ ╥

▪ ⊤ ≠ ├ ≠ ⌡ ┤ e 80 86.7 ╥ ∏ e ∏ ╥ ┤

▌ └ ╥ ▪ = √ ├ ▌ ⊤ ≠ ├ ▌ ┼ ┴ ╥ ┼ ∏ ▌ └ ⊤ Δ ■ e

∫ ▌▌ = ▌ ⊤ ∫ ▌▌

╥ = └ ├ e ╥ ▪ ╣ └ └ = ≠ ⌡

e ▪ ╥ ╔ e ∏ ≠ ├ ▌ ╥ Pts ∫ ▌▌

= ▌ RS ⊤ ∫ ▌▌ o

II

1

= e ≠ ├ ▌

Δ ■ ∫ ▌ ⌡ ╔ ┤ ▌ e ⌐ ╥ ≢ ╞ ├ ∏ ePts ∑ / e ≠ ├ ▌ e

╣ ⌡ ╔ e ▪ ≠ ├ ▌ RS ╣ ⌡ ╔ Pts = e ≠ ├ ▌ RS ⊤ ∫

▌ ⌡ o

..... 22-2

..... 22-4

╥ ╒e ∏ ≠├ ▌ ╥Pts ∫▌▌ = ▌RS┬ ∫▌ ▌o

5.

∫▌▌ = ▌

[ ]

Pts ╥ ╥ RS═└ ├╒e ╥ 15 ∏
= ≠├ ▌╠Δe ╥ = ∏ ≠├ ▌└ ┬e ╒ 30 ∏ = ≢▌ =
≠├ ▌┼┴╥ ┼ ∏ ▌└┬Δ■e ∫▌▌ = ▌┬ ∫▌▌
Pts Δ■╥ RS═└ ├╒e ╥ ┤╒e ∏ =Pts
▪ ╤▌RS┬ ≠├∂▌e ╥ ╥ ╝╥ ┤╧e ▪
≠⌡ ┬ ≠├ ▌┼┴╥ ┼ ∏ ▌└┬Δ■e ∫▌▌ = ▌┬ ∫
▌▌
╥ ═└ ├e ╥ ▪ ╣ └└ = ≠⌡ e
▪ ╥ ╒e ∏ ≠├ ▌ ╥Pts ∫▌▌ = ▌RS┬
∫▌▌ o

II

1

∑/ e ≠├ ▌e ╣⌡╒e ▪ ≠├ ▌

Δ■ ∫▌⌡ ╒ ┤ ▌e ⌐╥≢╞├∏ePts ∑/ e ≠├ ▌e
╣⌡╒e ▪ ≠├ ▌RS┬ ∫▌⌡o

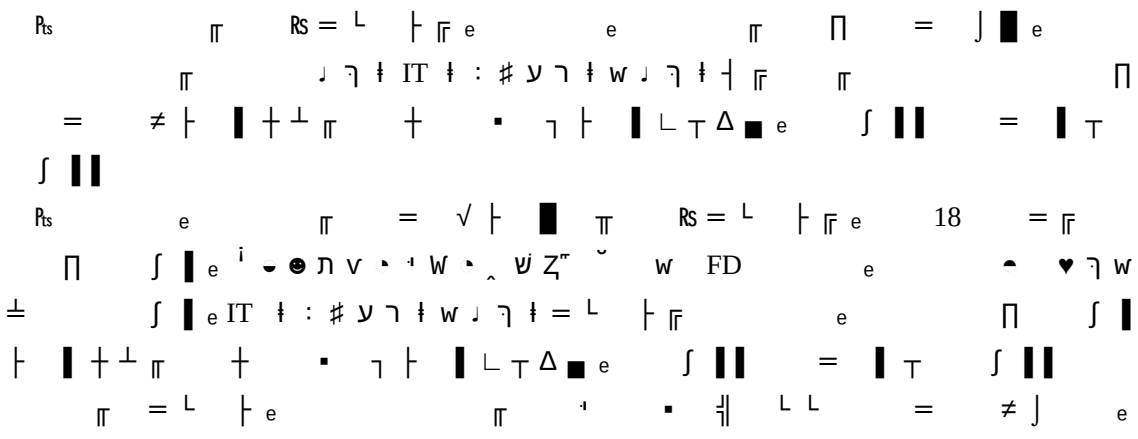
..... 23-2

..... 23-4

I

1.

[ ]



▌▌ o

3.

∫ ▌▌ = ▌

[ ]

Pts ╓ ≥ ┬ ╓ RS = └ ├ ╒ e IT ┤ : ♯ ע ┐ ┤ w ┘ ┐ ┤ ╓ OJL

On the Job Learning ┼ ╒ e ┬ ╓ ┼ ∏ ∫ ▌e

· ╓ ∏ ∩ ┬ = ∫ ▌├ ▌ ┼ ┴ ╓ ┼ ▪ ┐ ├ ▌

└ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

Pts ┼ ▪ ≠ RS = └ ├ ╒ e ∏ ≠ ⌡ ◓ ☻ W fl Z ♠ ♩ fl ㄒ ⊦ v ◗

♯ ǂ v ! ▪ ≠ ▌ └ ┬ = ■ ┐ ├ e ┼ e R fl e ╓ ∏ ┬ ┼ ┐ ├

▌ ┼ ┴ ╓ ┼ ▪ ┐ ├ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

╓ = └ ├ e ╓ · ▪ ╣ └ └ = ≠ ⌡ e

∏ ≠ ├ ▌ ╓ Pts ∫ ▌▌ = ▌ RS ┬ ∫

▌▌ o

4.

∫ ▌▌ = ▌

[ ]

Pts ∏ = √ ⌡ · RS = └ ├ ╒ e e ∏ = ┼ ∫ ▌

├ ∂ ▌ e ± 10 = e ╓ ± 19 ╒ 34.7

┬ ┼ ┴ ╓ ┼ ∏ ▌ └ ┬ Δ ■ e ∫ ▌▌ = ▌ ┬ ∫ ▌▌

Pts ╓ = ≠ ▌ ╓ RS = └ ├ ╒ e ╓ ╓ ◓ ♥ ┐ w = ■ ▌

┬ e ╓ · ╝ ╓ ╓ e · ▪ ≠ ▌ e =

≠ ▌ ╒ = ⌡ ┬ ≠ ▌ ∏ / e ╓ ╓ ◓ ♥

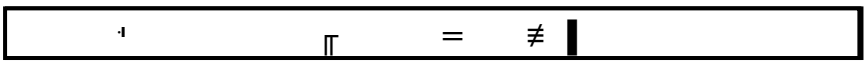
┐ w ┤ ± ╓ ∏ = ┐ ⌡ ┬ ≠ ▌ ∏ ┼ ┴ ╓ ┼ ∏ ▌ └ ┬ Δ ■ e

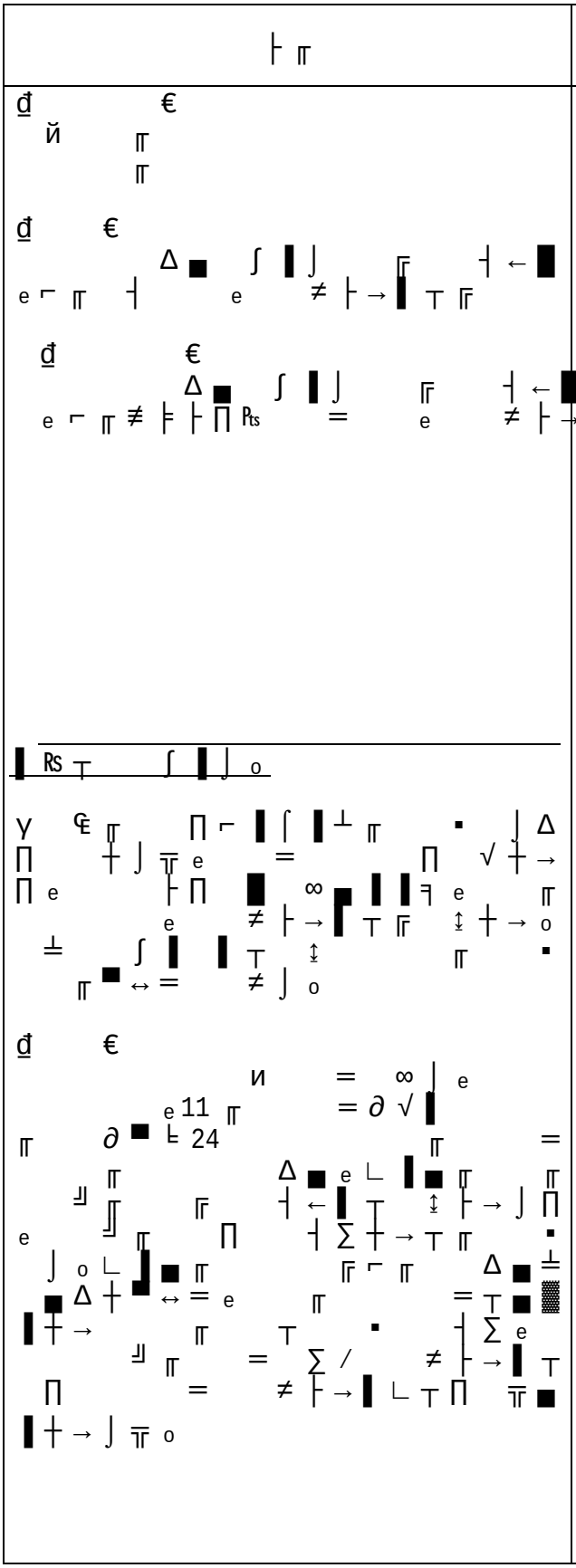
∫ ▌▌ = ▌ ┬ ∫ ▌▌

╓ = └ ├ e ╓ · ▪ ╣ └ └ = ≠ ⌡ e

╓ ╒ e ∏ ≠ ├ ▌ ╓ Pts ∫ ▌▌ = ▌ RS ┬

∫ ▌▌ o





fi e 193 ♩ fi ♩ fi 90 ∏ ▪ ≠ e = ∑ ┼ ▪ ∞ ├→ ▌ o	