

Family

Ecological Efficiency = 'Evenness'

4 humans

Family



Ecological Efficiency = 'Evenness'

4 humans



1 dog



Family

Ecological Efficiency = 'Evenness'

4 humans



1 dog



3 cats



Family



Ecological Efficiency = 'Evenness'

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4 goldfish



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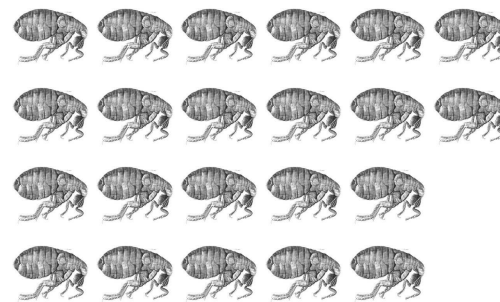
3 cats



4 goldfish



22 fleas



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Shannon Diversity (= uncertainty) for $M = 5$ species with probabilities p_i :

$$H = - \sum_{i=1}^M p_i \log_2 p_i = 1.59 \quad \text{bits per species}$$

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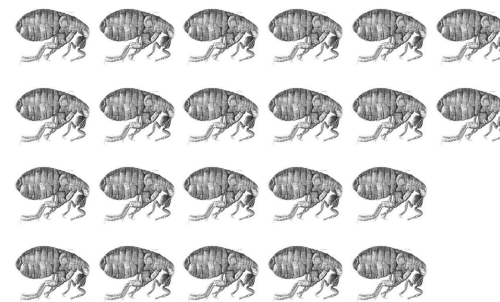
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Normalized Shannon Diversity = "evenness":

$$J = H/H_{max} = 0.69$$