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Problem solving Set B

Bronze

$$\text{Frequency Density} = \frac{\text{frequency}}{\text{Class width}}$$

Between 32 and 35:

Class width: $35 - 32 = 3$

Frequency density = 21

Frequency = $21 \times 3 = 63$

Between 35 and 40

$fd = 43$

$CW = 40 - 35 = 5$

$f = 43 \times 5 = 215$

Between 40 and 42

$fd = 8$

$CW = 42 - 40 = 2$

$f = 2 \times 8 = 16$

Total = 63 + 215 + 16 = 294 students

Silver

$40 + 5(36) + 5(40) + 4(20) = 500$ blocks

500 small blocks = 100 people

1 block = 0.2 people

between 25 to 50

Blocks = 20 + 375 + 5 + 40 = 440 blocks

people = $440 \times 0.2 = 88$

Gold

80 people shown on the diagram

$10 + 120 + 60 + 60 = 250$ blocks

1 block = $\frac{80}{250} = 0.32$

$10 \times 5 = 50 = 16$

$(30 \cdot 35, \quad 40 \cdot 45) = 40$

$\begin{pmatrix} 1 & : & 4 \\ 8 & : & 32 \end{pmatrix}$

find the frequency outside of 25 - 43 and substract from the total

$120 - (18 + 11.2 + 19.2) = 71.6$

71 or 72 swimmers