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Problem solving Set B

Bronze

$$\text{frequency Density} = \frac{\text{frequency}}{\text{class width}}$$

Between 32 and 35:

$$\text{Class width: } 35 - 32 = 3$$

$$\text{frequency density} = 21$$

$$\text{frequency} = 21 \times 3 = 63$$

Between 35 and 40

$$fd = 43$$

$$CW = 40 - 35 = 5$$

$$f = 43 \times 5 = 215$$

Between 40 and 42

$$fd = 8$$

$$CW = 42 - 40 = 2$$

$$f = 2 \times 8 = 16$$

$$\text{Total} = 63 + 215 + 16 = 294 \text{ students}$$

Silver

$$40 + 5(36) + 5(40) + 4(20) = 500 \text{ blocks}$$

$$500 \text{ small blocks} = 100 \text{ people}$$

$$1 \text{ block} = 0.2 \text{ people}$$

between 25 to 50

$$\text{Blocks} = 20 + 375 + 5 + 40 = 440 \text{ blocks}$$

$$\text{people} = 440 \times 0.2 = 88$$

Gold

80 people shown on the diagram

$$10 + 120 + 60 + 60 = 250 \text{ blocks}$$

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

$$10 \times 5 = 50 = 16$$

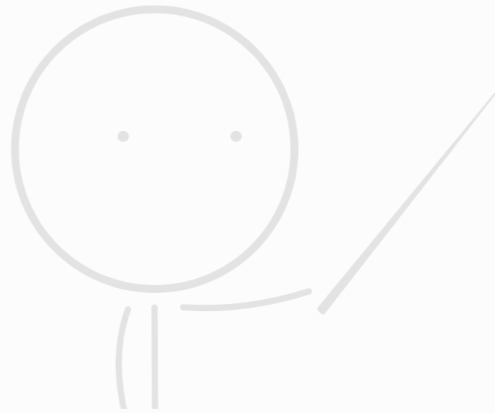
$$(30 \cdot 35, 40 \cdot 45) = 40$$

$$\begin{array}{ccc} 1 & : & 4 \\ \downarrow & & \downarrow \\ 8 & : & 32 \end{array}$$

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

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

71 or 72 swimmers



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