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13) Question: Use the production data for a plastic manufacturing company in the table below to answer this question. Which cup's production is about 12% of the shift's total production?

Items produced on different shifts				
	Shift 1	Shift 2	Shift 3	Total
Red cups	1616	1568	1552	4736
Blue cups	1232	768	752	2304
Green cups	368	896	816	2688
Total	3216	3232	3280	9728

- A) Red cups on Shift 1
- B) Green cups on Shift 1
- C) Blue cups on Shift 2
- D) Green cups on Shift 3

nw,nc

For speed, while solving something similar, only THINK the words in blue; WRITE only the words in other COLORS.

Given: 1) The production data in the table above.

Solve: Which cup's production is about 12% of the shift's total production?

Road Map of Solution:

First Step: Look for any trends that are related to Shift's Total Production.

Second Step: Create an equation based on that trend.

Third Step: Simplify the equation to get the value of 1%.

Fourth Step: Modify the equation to get the value of 12%.

Fifth Step: Compare the value of 12% obtained below, with the numbers in the production data table above.

Solution

First Step: Look for any trends that are related to a Shift's Total Production.

A..... Shift's Total Production is a little over 3200 units ..... equation #1

Second Step: Create an equation based on that trend.

Therefore, 100% of Shift's Total Production is a little over 3200 units

100% of Shift's Total Production is 3200 units

100% x Shift's Total Production ≈ 3200 units ..... equation #2

Third Step: Simplify the equation to get the value of 1% of Shift's Total Production.

$\frac{1}{100} \times 100\% \times \text{Shift's Total Production} \approx 3200 \text{ units} \times \frac{1}{100}$  ..... equation #3

Fourth Step: Modify the equation to get the value of 12% of Shift's Total Production.

$\frac{12}{100} \times 100\% \times \text{Shift's Total Production} \approx 3200 \text{ units} \times \frac{12}{100}$

$\frac{12}{100} \times 100\% \times \text{Shift's Total Production} \approx 3200 \text{ units} \times \frac{12}{100}$

$\frac{12}{1} \times 1\% \times \text{Shift's Total Production} \approx 32 \text{ units} \times \frac{12}{1}$

12 x 1% x Shift's Total Production ≈ 32 units x 12

12% x Shift's Total Production ≈ 384 units ..... equation #4

Fifth Step: Compare the value of 12% (384 units) obtained in Fourth Step, with the numbers in the production data table.

368 (from Green Cups; Shift 1) in the table above is about the same as 384.

No other number comes close to 12% (384 units) of the Shift's Production Total, hence we will go with Answer (B)