

Question from Joelle

A factory manufactured 2620 'Small', 'Medium' and 'Large' size T-shirts. The ratio of the number of 'Medium' size T-shirts to the number of 'Small' size T-shirts was 1 : 3. After $\frac{3}{5}$ of the 'Small' size T-shirts, $\frac{1}{4}$ of the 'Large' size T-shirts and none of the 'Medium' size T-shirts were sold, there were 1645 T-shirts left. How many 'Small' size T-shirts were there at first?

Suggested Solution:

	S	:	M	:	L	
	3×5		$: 1 \times 5$			
	$= 15u$		$: 5u$			$\left(\frac{4}{4}\right) 2620 - 20u$ (at first)
Sold	$\left(\frac{3}{5}\right) - 9u$					$\left(\frac{1}{4}\right)$

Left	$6u$:	$5u$			$\left(\frac{3}{4}\right) 1645 - 11u$ (left)

'Large' size T-shirts

At first	:	Left
$2620 - 20u$:	$1645 - 11u$
4	:	3

$$4 \times (1645 - 11u) \rightarrow 3 \times (2620 - 20u)$$

$$6580 - 44u \rightarrow 7860 - 60u$$

$$60u - 44u \rightarrow 7860 - 6580$$

$$16u \rightarrow 1280$$

$$1u \rightarrow 80$$

$$15u \rightarrow 80 \times 15 = 1200 \text{ ('Small' size T-shirts at first)}$$