

Numbers and Operations: Screen Printer

Pullover Prints

Job Description: Customize designs for corporations, business and individuals on textiles.

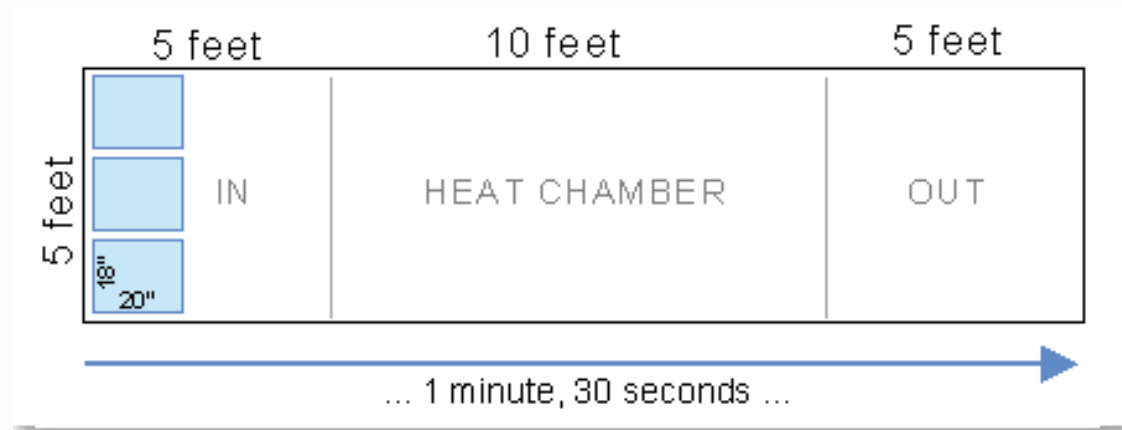
Problem:

A dryer cures ink on shirts. The length of the dryer includes 5 feet going in, 5 feet coming out, and the heat chamber of 10 feet. The dryer is 5 feet wide.

A shirt load equals 3 shirts across. The average space occupied by shirts is 18" x 20" with about 2 inches spacing between.

A length of material can travel from one end to the other of the dryer in about 1 minute, 30 seconds.

How many shirts would be on a full belt load? How many shirts can be cured every hour?



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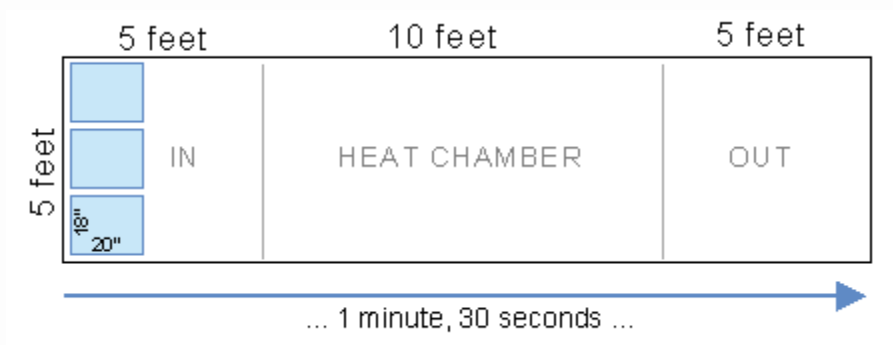
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Solution:

$5 \text{ ft} + 10 \text{ ft} + 5 \text{ ft} = 20 \text{ ft} \times 12 \text{ in/ft} = 240 \text{ inches}$ (length of dryer)

$240 \text{ in} \div (20 + 2) = 10 \text{ shirts} \times 3 \text{ shirts across} = 30 \text{ shirts per load}$

30 shirts can be completed every 1.5 minutes.

$60 \text{ minutes} \div 1.5 \text{ min per load} \times 30 \text{ shirts/load} = 1,200 \text{ shirts/hour}$