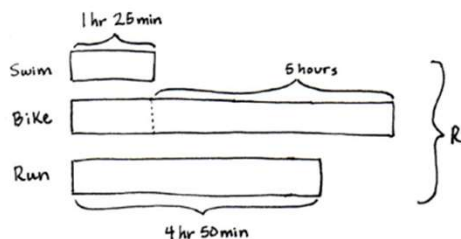


Multi-step Measurement Worksheets (Customary Units)

1. Paula's time swimming in the Ironman Triathlon was 1 hour 25 minutes. Her time biking was 5 hours longer than her swimming time. She ran for 4 hours 50 minutes. How long did it take her to complete all three parts of the race?



It took Paula
12 hours 40 minutes
to complete the
whole race.

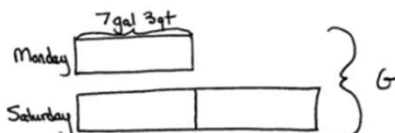
Solution A

$$\begin{aligned}
 R &= 1 \text{ hr } 25 \text{ min} + 6 \text{ hr } 25 \text{ min} + 4 \text{ hr } 50 \text{ min} \\
 &= 11 \text{ hr } 100 \text{ min} \\
 &\quad \quad \quad \uparrow \\
 &\quad \quad \quad 60 \text{ min } 40 \text{ min} \\
 R &= 12 \text{ hr } 40 \text{ min}
 \end{aligned}$$

Solution B

$$\begin{aligned}
 &1 \text{ hr } 25 \text{ min} \xrightarrow{+1 \text{ hr } 25 \text{ min}} 2 \text{ hr } 50 \text{ min} \xrightarrow{+5 \text{ hr}} 7 \text{ hr } 50 \text{ min} \\
 &7 \text{ hr } 50 \text{ min} \xrightarrow{+4 \text{ hr}} 11 \text{ hr } 50 \text{ min} \xrightarrow{+10 \text{ min}} 12 \text{ hr} \xrightarrow{+40 \text{ min}} 12 \text{ hr } 40 \text{ min} \\
 R &= 12 \text{ h } 40 \text{ min}
 \end{aligned}$$

2. Nolan put 7 gallons 3 quarts of gas into his car on Monday and twice as much on Saturday. What was the total amount of gas put into the car on both days?



Solution A

$$\begin{aligned}
 1 \text{ gallon} &= 4 \text{ quarts} \\
 7 \text{ gallons} &= 28 \text{ quarts} \\
 28 \text{ quarts} + 3 \text{ quarts} &= 31 \text{ quarts} \\
 1 \text{ unit} &= 31 \text{ quarts} \\
 3 \text{ units} &= 93 \text{ quarts} \\
 G &= 93 \text{ quarts}
 \end{aligned}$$

Nolan put 93 quarts of gas into his car.

Solution B

$$\begin{aligned}
 3 \times 7 \text{ gallons} &= 21 \text{ gallons} \\
 3 \times 3 \text{ quarts} &= 9 \text{ quarts} = 2 \text{ gallons } 1 \text{ quart} \\
 &\quad \quad \quad \uparrow \quad \uparrow \quad \uparrow \\
 &\quad \quad \quad 4 \text{ qt } 4 \text{ qt } 1 \text{ qt} \\
 21 \text{ gallons} + 2 \text{ gallons } 1 \text{ quart} &= 23 \text{ gallons } 1 \text{ quart} \\
 G &= 23 \text{ gallons } 1 \text{ quart} \\
 \text{Nolan put } 23 \text{ gallons } 1 \text{ quart} &\text{ of gas into his car.}
 \end{aligned}$$

Solution C

$$\begin{aligned}
 8 \text{ gal} \times 3 &= 24 \text{ gal} \\
 24 \text{ gal} - 3 \text{ qt} &= 23 \text{ gal } 1 \text{ qt} \\
 &\quad \quad \quad \uparrow \\
 &\quad \quad \quad 23 \text{ gal } 4 \text{ qt}
 \end{aligned}$$