\[
\begin{align*}
\text{Rate of current} & = \frac{45}{3} = 15 \\
\text{Rate of wind} & = \frac{24}{2} = 12 \\
\text{Rate in still water} & = \frac{3}{2} \\
\text{Rate of current} & = \frac{45}{3} = 15
\end{align*}
\]
\[ x = 150 \]
\[ 2x = 300 \]
\[ x = 150 \]
\[ x + 300 = 450 \]
\[ 5 \]
\[ 10(x + 4) = 1800 \]
\[ x + y = 180 \]
\[ x + 120 = 180 \]
\[ x = 60 \]
\[ y = 120 \]
\[ \text{against} \]
\[ x - y = 10 \]
\[ x + y = 180 \]
\[ 2 \]
\[ x = 7.5 \]
\[ 2x = 15 \]
\[ x = 7.5 \]
\[ 3.5 (x + 4) = 35 \]
\[ 35 \]
\[ x + y \]
\[ r + t = 2 \]
\[ x = 60 \]
\[ 2x = 120 \]
\[ x + h = 120 \]
\[ 2.5 (x + 4) = 150 \]
\[ 5 \]
\[ 10 (x + 4) = 1200 \]
\[ x + y = 1200 \]
\[ 2.5 \]
\[ x + y = 1500 \]
\[ x = 180 \]
\[ y = 120 \]
\[ \text{against} \]
\[ \text{with} \]
\[ \text{against} \]
\[ \text{with} \]
\[ \text{rate in still air is 30 mi/hr.} \]
\[ \text{The rate in still air is 30 mi/hr.} \]
\[ \text{The rate in still water is 5 mi/hr.} \]
\[ \text{The rate in still water is 5 mi/hr.} \]
The rate in still air is 550 ft/min. The rate of the wind is 50 ft/min.

Wind current problems

\[
\begin{align*}
\text{rate in still air} &= 550 \text{ ft/min} \\
\text{rate of wind} &= 50 \text{ ft/min} \\
\text{rate on still escalator} &= x \\
\text{rate of moving escalator} &= y
\end{align*}
\]

\[
\begin{align*}
x &= 3 \text{.}5 \\
y &= 38 \text{.}5
\end{align*}
\]

\[
\begin{align*}
x(y) &= 38 \text{.}5 \quad y = 38 \text{.5} \\
x &= 2 \text{80} \text{.}3 \quad x = 28 \text{.3} \\
\text{rate of moving escalator} &= 3 \text{.5} \\
\text{rate on still escalator} &= 5
\end{align*}
\]

\[
\begin{align*}
x &= 28 \text{.}3 \\
y &= 38 \text{.5}
\end{align*}
\]

\[
\begin{align*}
x &= 28 \text{.3} \\
y &= 38 \text{.5}
\end{align*}
\]

\[
\begin{align*}
x &= 28 \text{.3} \\
y &= 38 \text{.5}
\end{align*}
\]
The current is 1 km/hr. The rate of the waterer is 1 km/hr. The rate in still water.

\[ \frac{2x}{10} = 2 \]

\[ \frac{3x}{12} = 3 \]

\[ \frac{x}{3} \]

Y = Rate of current

\[ X = Rate \ in \ still \ water \]

\[ \frac{y+1}{30} = \frac{1}{12} \]

\[ 30 + y = 30 \]

\[ y = 10 \]

\[ x = 310 \]

\[ 2x = 620 \]

\[ \sqrt{620^2 - 310^2} = 300 \]

\[ x = 300 \]

\[ 2\sqrt{300} = 60 \]

\[ \text{The wind is 10 km/hr.} \]

\[ \text{The rate in still air.} \]

\[ \text{Y = Rate of wind} \]

\[ X = Rate \ in \ still \ air \]

\[ \text{against} \]

\[ \text{with} \]

\[ \text{X+Y = 132} \]

\[ \text{X-Y = 240} \]

\[ \text{The wind speed} \]

\[ \text{D = Distance against wind} \]

\[ \text{U = Rate of the wind} \]

\[ \text{X = Rate in still air} \]

\[ \text{against 132-y} \]

\[ \text{with 132+y} \]

\[ \text{Y = Y} \]

\[ \text{X = X} \]

\[ \text{U = U} \]

\[ \text{D = D} \]
The rate in still water is 5 km/hr.

The rate of the current is 2 km/hr.

\[ \begin{align*}
2x + y &= 18 \\
5x + 4y &= 60
\end{align*} \]

\[ \begin{align*}
x &= 4 \\
y &= 2
\end{align*} \]

The rate in still water is in the x direction.

The rate of the current is in the y direction.

\[ \begin{align*}
x &= 4 \text{ km/hr} \\
y &= 2 \text{ km/hr}
\end{align*} \]
The escalator is 15 ft/sec. The speed of the escalator is y = rate of escalator. x = rate on still escalator.

\[ v = 1 \]
\[ 2x = 15 \]
\[ x = \frac{15}{2} \]
\[ z + y = 3 \]
\[ 75(x+y) = 75 \]
\[ 75(x-1) = 75 \]
\[ 2x + y = 75 \]
\[ x + y = 15 \]

Against: x - y = 15 ft/sec
With: x + y = 42 ft/sec

Wind

10 15 7.5
3 times faster than the current.

Water is in still water.

\[ 5x + y = 20 \]
\[ 5x + y = 10 \]
\[ x + y = 4 \]
\[ x + y = 60 \]
\[ x + y = 25 \]
\[ x + y = 10 \]
\[ x + y = 60 \]
Let's denote the rate of the current as $x$ m/min, the rate of the wind as $y$ m/min, and the rate of the boat in still water as $z$ m/min.

\[
\frac{2x}{z} = \frac{10}{3} \quad \Rightarrow \quad 2x = 10z/3
\]

This equation represents the condition of the boat's movement with respect to the still water.

The rate of the wind is 50 km/hr, which is 50 m/min.

The rate in still air is 55 km/hr, which is 55 m/min.

The rate in still water is 14 km/hr, which is 70 m/min.

\[
\frac{2x + y}{x + y + z} = 14 \quad \Rightarrow \quad 2x + y = 14(x + y + z)
\]

This equation represents the condition of the boat's movement in still water.

\[
\frac{2x + y}{2x + y} = \frac{18}{12} \quad \Rightarrow \quad 2x + y = 18
\]

This equation represents the condition of the boat's movement with the wind.

\[
b = \frac{5x + 3z}{4} = 160 \quad \Rightarrow \quad 5x + 3z = 640
\]

This equation represents the condition of the boat's movement in still water.

\[
x = 10z/3 \quad \Rightarrow \quad x = 10
\]

This equation represents the rate of the current.

\[
5(y + x) = 60 \quad \Rightarrow \quad y + x = 12
\]

This equation represents the condition of the boat's movement in still water.

\[
3(x + y) = 60 \quad \Rightarrow \quad x + y = 20
\]

This equation represents the condition of the boat's movement with the wind.

\[
5y + 3z = 60 \quad \Rightarrow \quad \text{No solution found...}
\]

Do you have any other questions?
The rate in still water is 12 km/hr. The rate of current is 4 km/hr.

\[
\begin{align*}
\text{The rate of the plane in still air} & = 2.5 \text{ km/hr.} \\
\text{The rate of the wind is 100 km/hr.}
\end{align*}
\]
The rate of the current is 3.75 m/min.

The rate in still water is 8.75 m/min.

\[ y = 3.75 \]
\[ x = 8.75 \]
\[ 8.75 \times y = 12.5 \]
\[ 2x \]
\[ x = \frac{17.5}{2} \]
\[ 20(x-y) = 100 \to x-y = 5 \]
\[ x+y = 100 \]
\[ 8(x+y) = 100 \]

\[ y = \text{rate of current} \]
\[ x = \text{rate in still water} \]

\[ \text{against} \]
\[ \begin{array}{c|c}
\text{x-y} & 100 \\
\hline
\text{x+y} & 20 \\
\text{rate} & 0
\end{array} \]

The rate of the wind is 23 m/hr.

Still air is 335 m/hr.

The rate of the plane in

\[ x = 335 \]
\[ 2x \]
\[ x = \frac{460}{2} \]
\[ 1.5(x-y) = 450 \to x-y = 300 \]
\[ 4(x+y) = 1400 \to x+y = 350 \]

\[ y = \text{rate of wind} \]
\[ x = \text{rate in still air} \]

\[ \text{against} \]
\[ \begin{array}{c|c|c}
\text{x-y} & 150 & 1.5 \\
\hline
\text{x+y} & 450 & 1400 \\
\text{rate} & 0 & -
\end{array} \]