a

h|

2

a

h|

2

25

25

1

$\vec{v}$

$-\vec{v}$

3ज

$\vec{v}$

$\vec{w}$

$\vec{v} + \vec{w}|$

$\vec{v} + \vec{w}|$

$\vec{v}$

$\vec{w}$

$$\left|\binom{2}{-1} = \binom{3}{1} - \binom{1}{2}\right|$$

$$\left| \{ \begin{pmatrix} 1 \\ 2 \\ 1 \end{pmatrix} + t \cdot \begin{pmatrix} 1 \\ 1 \\ 1 \end{pmatrix} \mid t \in \mathbb{R} \} \right|$$

$$P = \{ \begin{pmatrix} x \\ y \\ z \end{pmatrix} \mid 2x + y + z = 4 \}$$

$$P = \{ \begin{pmatrix} 2 \\ 0 \\ 0 \end{pmatrix} + \begin{pmatrix} -0.5 \\ 1 \\ 0 \end{pmatrix} y + \begin{pmatrix} -0.5 \\ 0 \\ 1 \end{pmatrix} z \mid y, z \in \mathbb{R} \}$$

$\vec{v}$

$\vec{u}$

$\vec{u}$

$\vec{v}$

$\vec{u} + \vec{v}|$

start

finish

P

Q

$$\left.\binom{0}{3}{2}\right|$$

$$\begin{pmatrix} 1 \\ 1 \\ 0 \end{pmatrix}\Bigg|$$

. . . .

Al

$B\backslash$

. . . .

*l

*l

*l

*l

. . . .

$(\frac{1}{2}\ \frac{3}{7})|$

$\left|\begin{pmatrix} 1 & 3 \\ 0 & 1 \end{pmatrix}\right.$

. . . .

*l

*l

*l

*l

$\left(\begin{smallmatrix}1 & 0\\ 0 & 1\end{smallmatrix}\right)|$

$$\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}\Big|$$

$\begin{pmatrix} 2 & 2 \\ 4 & 3 \end{pmatrix}\Big|$

$$\begin{pmatrix} 2 & 0 \\ 0 & -1 \end{pmatrix}\Big|$$

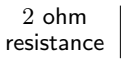
$$\begin{pmatrix} 1 & 1 \\ 0 & -1 \end{pmatrix}\Big|$$

$\begin{pmatrix} 2 & 2 \\ 0 & -1 \end{pmatrix}\Big|$

$(1, 1)|$

$(1, 1)|$

20 volt
potential



2 ohm
resistance

5 ohm
resistance

3 ohm
resistance

12 ohm

8 ohm

$\uparrow i_0$ |

$i_1 \downarrow\!\!\!\downarrow$

$\downarrow i_2|$

5 ohm

2 ohm

50 ohm

10 ohm

4 ohm

$\uparrow i_0$ |

i_1

$\searrow i_2|$

$i_5 \rightarrow|$

i_3

$\swarrow i_4|$

3 ohm |

2 ohm |

3 ohm |

2 ohm |

3 ohm |

2 ohm |

3 ohm |

2 ohm |

Main Street

North Avenue

Pier Boulevard

Shelburne St

Willow

Winooski Ave

west

east

Jay Ln

5 ohm |

10 ohm |

3 ohm |

Dome
Light

Door
Actuated
Switch

Brake
Lights

4

R

Brake
Actuated
Switch

Light
Switch

Off

Dimmer

Hi

Lo

4

R

4

R

Headlights

4

R

Rear
Lights

4

R

Parking
Lights

$r_1|$

$r_3|$

$r_g|$

$r_2|$

$r_4|$

i_0

$i_1 \downarrow\!\!\!\downarrow$

i_2

i_3

i_0

$i_1 \downarrow\!\!\!\downarrow$

i_2

i_3

$i_4 \downdownarrows$

i_5

i_6

Main Street

North Avenue

Pier Boulevard

$i_1|$

$i_2|$

$i_3|$

30

70

5

$i_1|$

$i_2|$

$i_3|$

$i_4|$

$i_7|$

$i_5|$

$i_6|$