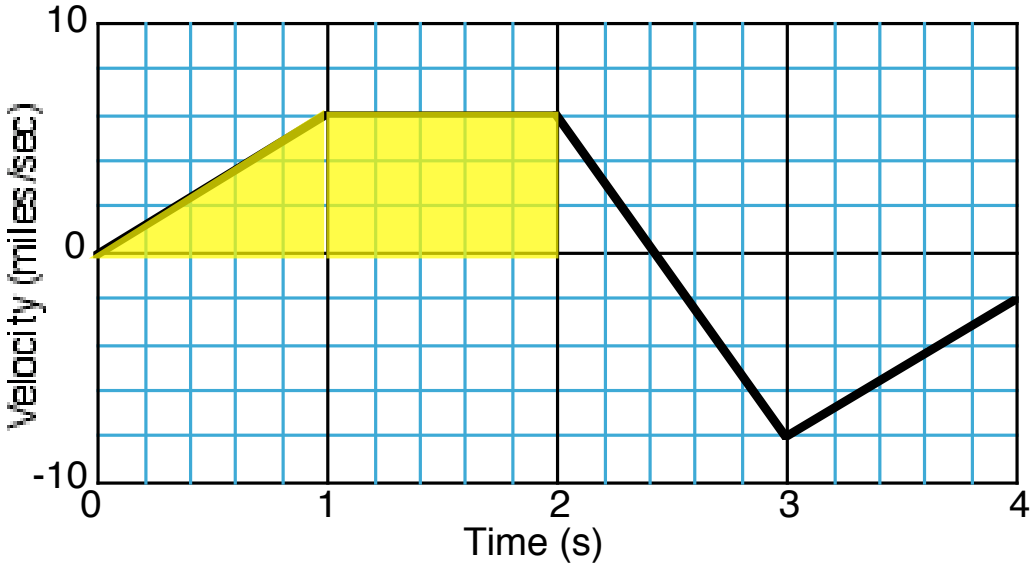


$$\text{Triangle} = \frac{1}{2}bh = \frac{1}{2}(1\text{s})\left(6\frac{\text{mi}}{\text{s}}\right) = 3\ \text{mi}$$

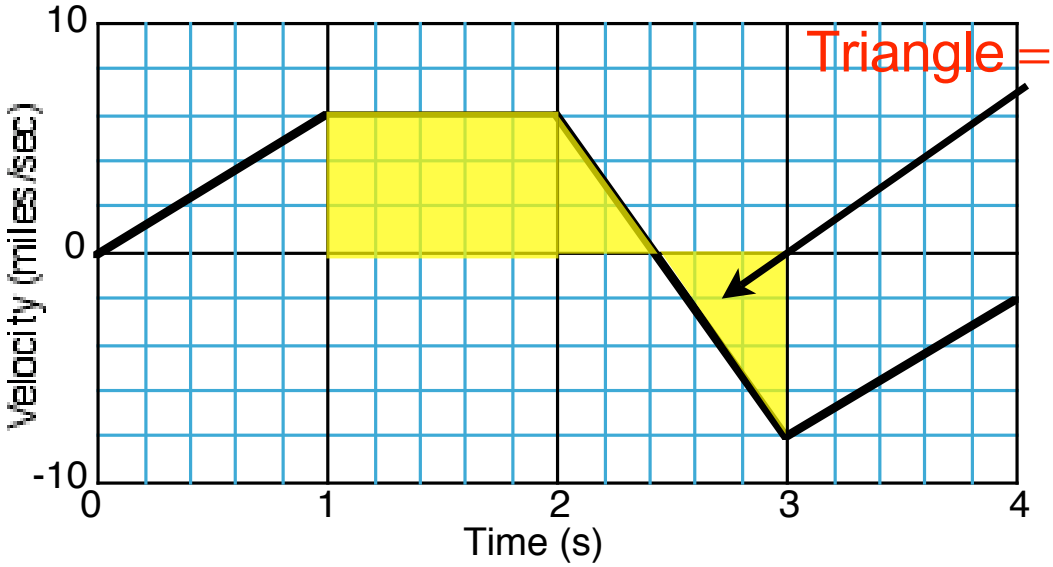
$$\text{Rectangle} = bh = (1\text{s})\left(6\frac{\text{mi}}{\text{s}}\right) = 6\ \text{mi}$$

Total "area" = 9 mi

85 Find the displacement from 0 to 2 seconds. 9 mi

86 Find the displacement from 1 to 3 seconds.

87 Find the displacement from 0 to 4 seconds.



$$\text{Triangle} = \frac{1}{2}bh = \frac{1}{2}(0.6s)\left(-8\frac{\text{mi}}{\text{s}}\right) = -2.4 \text{ mi}$$

$$\text{Rectangle} = bh = (1s)\left(6\frac{\text{mi}}{\text{s}}\right) = 6 \text{ mi}$$

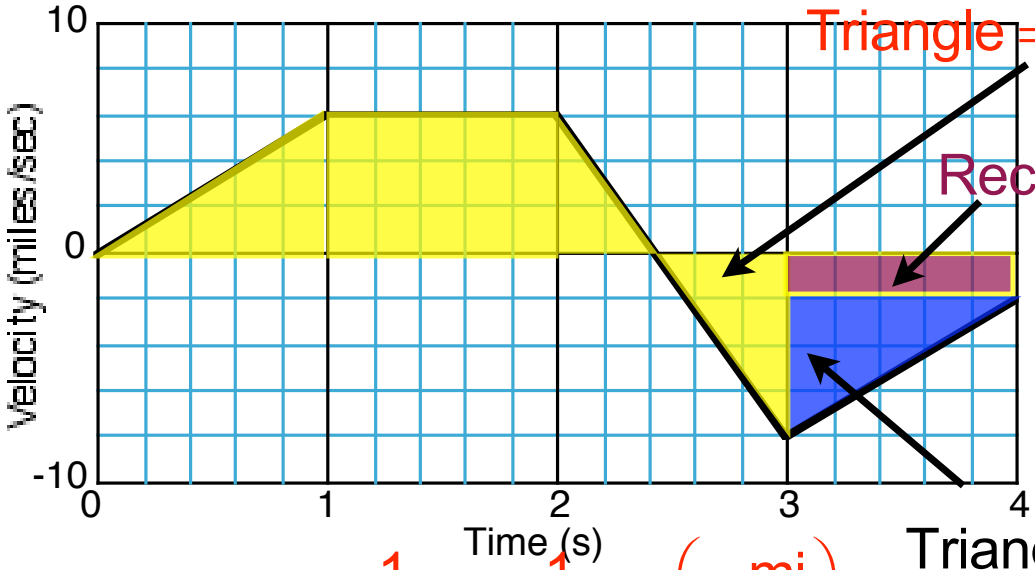
$$\text{Triangle} = \frac{1}{2}bh = \frac{1}{2}(0.4s)\left(6\frac{\text{mi}}{\text{s}}\right) = 1.2 \text{ mi}$$

Total "area" = 6 mi + 1.2 mi +-2.4 mi= 4.8 mi

85 Find the displacement from 0 to 2 seconds. 9 mi

86 Find the displacement from 1 to 3 seconds. 4.8 mi

87 Find the displacement from 0 to 4 seconds.



$$\text{Triangle} = \frac{1}{2}bh = \frac{1}{2}(0.6s)\left(-8\frac{mi}{s}\right) = -2.4 \text{ mi}$$

$$\text{Rectangle} = bh = (1s)\left(-2\frac{mi}{s}\right) = -2.0 \text{mi}$$

$$\text{Triangle} = \frac{1}{2}bh = \frac{1}{2}(1s)\left(-6\frac{mi}{s}\right) = -3 \text{ mi}$$

$$\text{Triangle} = \frac{1}{2}bh = \frac{1}{2}(1s)\left(6\frac{mi}{s}\right) = 3 \text{ mi}$$

$$\text{Rectangle} = bh = (1s)\left(6\frac{mi}{s}\right) = 6 \text{ mi}$$

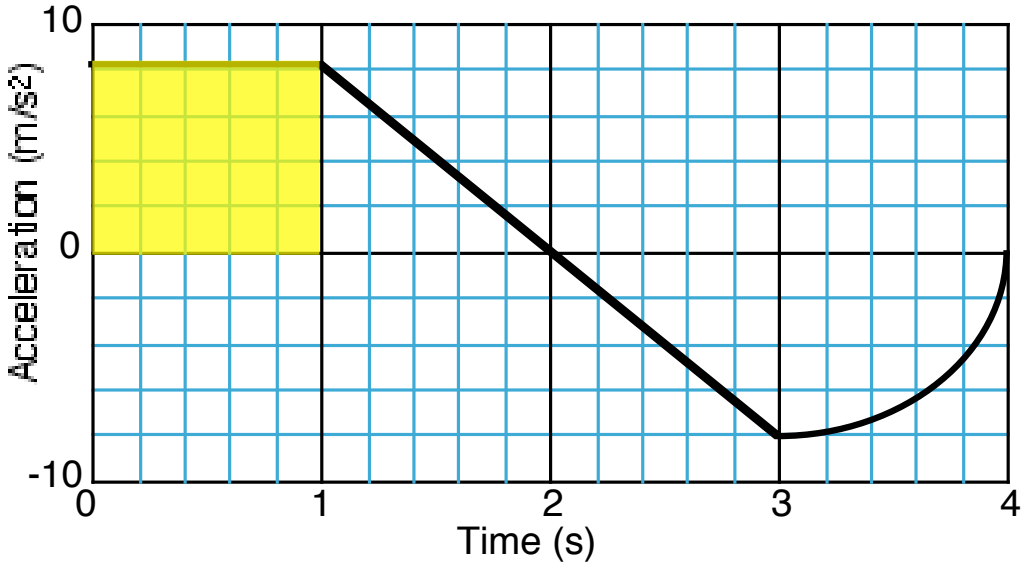
$$\text{Triangle} = \frac{1}{2}bh = \frac{1}{2}(0.4s)\left(6\frac{mi}{s}\right) = 1.2 \text{ mi}$$

Total "area" = 3 mi+6 mi+ 1.2 mi+ -1.8 mi+ -2 mi +-3 mi = 2.8 mi

85 Find the displacement from 0 to 2 seconds. 9 mi

86 Find the displacement from 1 to 3 seconds. 4.8 mi

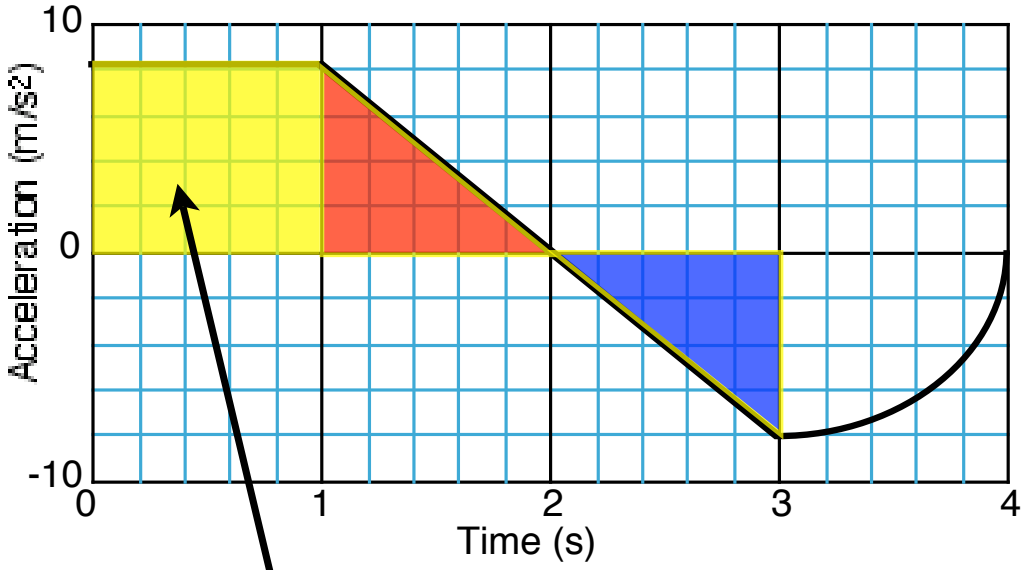
87 Find the displacement from 0 to 4 seconds. 2.8 mi



Rectangle $=bh=(1s)\left(8\frac{mi}{s}\right)=8\frac{m}{s}$

88 Find the total change in velocity from 0 to 1 seconds. 8 m/s

89 Find the total change in velocity from 0 to 3 seconds

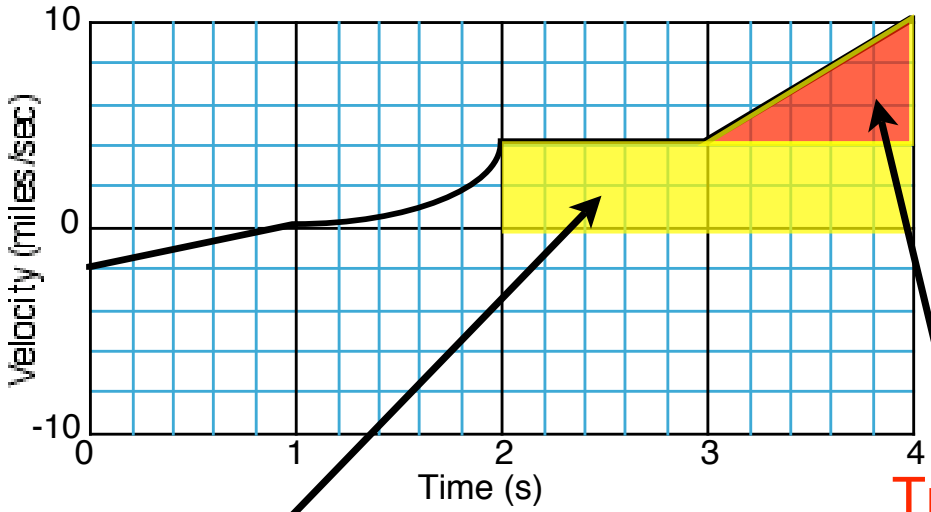


Rectangle $=bh=(1s)\left(8\frac{mi}{s}\right)=8\frac{m}{s}$

Because the area of the orange triangle is equal and opposite to the blue triangle, they cancel each other out.

88 Find the total change in velocity from 0 to 1 seconds. 8 m/s

89 Find the total change in velocity from 0 to 3 seconds 8 m/s



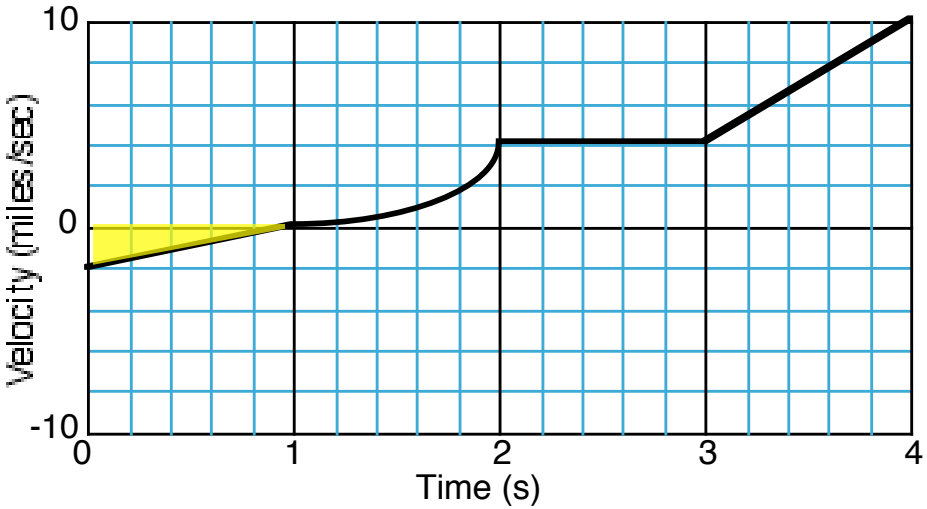
Rectangle $= bh = (2s)\left(4\frac{mi}{s}\right) = 8mi$

Triangle $= \frac{1}{2}bh = \frac{1}{2}(1\,s)\left(6\frac{mi}{s}\right) = 3\ mi$

Total "area" = 8 mi + 3 mi = 11 mi

90 Find the displacement from 2 to 4 seconds. 11 mi

91 Find the displacement from 0 to 1 seconds.



$$\text{Triangle} = \frac{1}{2}bh = \frac{1}{2}(1\text{ s})\left(-2\frac{\text{mi}}{\text{s}}\right) = -1\text{ mi}$$

90 Find the displacement from 2 to 4 seconds. 11 mi

91 Find the displacement from 0 to 1 seconds. -1 mi