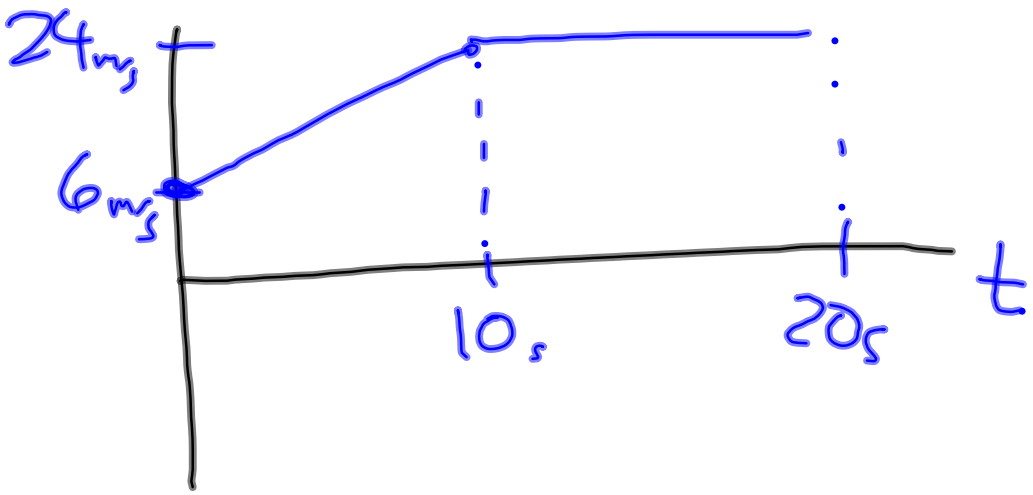
A train accelerates from 6 m/s up to 24 m/s over the course of 10 seconds, then maintains that velocity for another 10 seconds (to the right!).

What was the train's acceleration over the first 10 seconds? Over the next 10 seconds?



Note: On a V vs T graph, acceleration is rise/run (slope)

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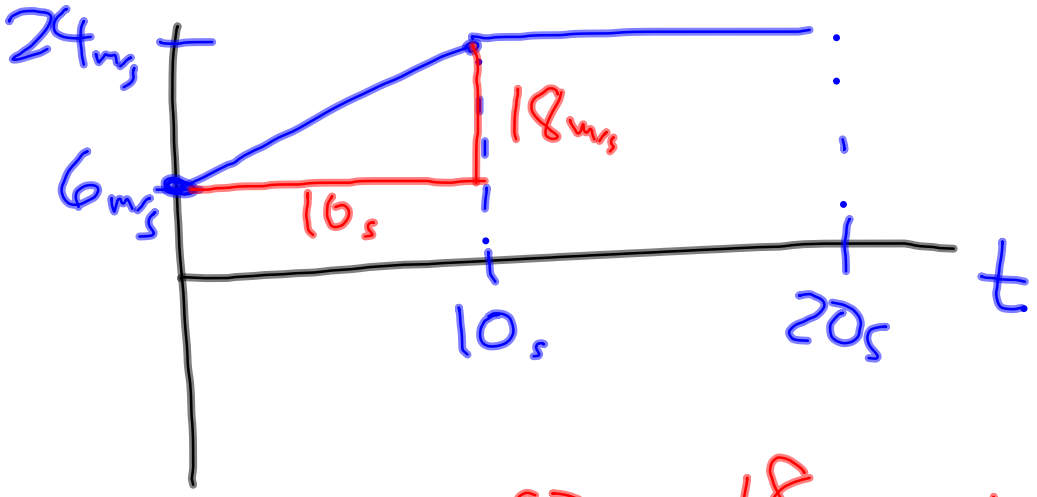

$$\text{accel} = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{18\ \text{m/s}}{10\ \text{s}} = 1.8\ \text{m/s}^2$$

$$\text{accel} = \text{slope} = \frac{\text{rise}}{\text{run}} = \frac{0\ \text{m/s}}{10\ \text{s}} = 0\ \text{m/s}^2$$