

Friday, 12/18 : Last day to work on  
Derby Racers in class

Friday, 1/8 : Due date for completed  
Derby Racers

Extend due dates if you talk to us  
by Tuesday, 1/5! (For legitimate  
reasons.)

acceleration = (final velocity - initial velocity)  $\div$  t

$$a = (v_2 - v_1) \div t$$

If you know	You can find	By using	Units
$v_2, v_1, t$	$a$	$a = (v_2 - v_1) \div t$	$\frac{m}{s^2}$
$a, v_2, v_1$	$t$	$t = (v_2 - v_1) \div a$	s
$a, v_1, t$	$v_2$	$v_2 = a \cdot t + v_1$	$\frac{m}{s}$
$a, v_2, t$	$v_1$	$v_1 = v_2 - a \cdot t$	$\frac{m}{s}$



$$\textcircled{1} v_1 = 1.5 \text{ m/s}$$
$$a = 0.5 \frac{\text{m}}{\text{s}^2}$$
$$t = 3 \text{ s}$$

accelerates  $0.5 \text{ m/s}^2$   
for 3 seconds.  
Final velocity?

$$\textcircled{2} v_2$$

$$\textcircled{3} v_2 = a \cdot t + v_1$$

$$\textcircled{4} v_2 = 0.5 \cdot 3 + 1.5$$
$$= 1.5 + 1.5$$
$$= 3.0$$

$$\textcircled{5} v_2 = 3.0 \frac{\text{m}}{\text{s}}$$