Conversions

1. $\frac{10{,}000\ \text{sec}}{1}\left(\frac{1\ \text{min}}{60\ \text{sec}}\right)\left(\frac{1\ \text{hr}}{60\ \text{min}}\right) = \_\_\_\ \text{hr}$

Calc do the top totally divide by bottom numbers, one at a time.

10000 enter
÷ 60 enter
÷ 60 enter = 2.78 hr

2. 182.88 cm
3. 91.44 m 3
4. 100 $\frac{\text{Km}}{\text{hr}}$

4. $\frac{27.78\ \text{m}}{\text{s}}\left(\frac{1\ \text{Km}}{1000\ \text{m}}\right)\left(\frac{60\ \text{s}}{1\ \text{min}}\right)\left(\frac{60\ \text{min}}{1\ \text{hr}}\right) = \_\_\_\ \frac{\text{Km}}{\text{hr}}$

27.78 × 60 × 60 enter
÷ 1000 enter

100 $\frac{\text{Km}}{\text{hr}}$

$\frac{90\ \text{Km}}{\text{hr}}\left(\frac{1000\ \text{m}}{1\ \text{Km}}\right)\left(\frac{1\ \text{hr}}{60\ \text{min}}\right)\left(\frac{1\ \text{min}}{60\ \text{s}}\right) =$ $= 25\ \frac{\text{m}}{\text{s}}$

5. Koten 200 Km in 2.8 hr

$s = \frac{200\ \text{Km}}{2.8\ \text{hr}} = 71.43\ \frac{\text{Km}}{\text{hr}}$

6. Amara

$s = \frac{\text{total dist}}{\text{total time}} = \frac{50\ \text{Km} + 100\ \text{Km}}{1\ \text{hr} + .5\ \text{hr} + 2\ \text{hr}} =$

$\frac{150\ \text{Km}}{3.5\ \text{hr}} = 42.86\ \frac{\text{Km}}{\text{hr}}$

7. Robbie

v_0	a
v_f	
t	

no d

$$a = \frac{v_f - v_0}{t} = \left(\frac{8\,m}{s} - \frac{2\,m}{s}\right)\left(\frac{1}{5\,s}\right)$$

$$\left(\frac{6\,m}{s}\right)\frac{1}{5\,s} = 1.2\,\frac{m}{s^2}$$

8. Blake

v_0	a
v_f	
t	

$$a = \frac{v_f - v_0}{t} = \left(\frac{5\,m}{s} - \frac{30\,m}{s}\right)\frac{1}{8\,s}$$

$$\left(\frac{-25\,m}{s}\right)\frac{1}{8\,s} = -3.13\,\frac{m}{s^2}$$

9. Michaela

v_0	v_f
t	
a	

$$v_f = v_0 + at$$

$$= -9.8\,\frac{m}{s^2}(.8\,s)$$

$$-7.84\,\frac{m}{s}$$

10. Ryan

v_0	d
a	
t	

no v_f

$$d = v_0 t + \frac{1}{2}at^2$$

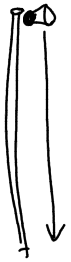
$$= \frac{4\,m}{8}\left(\frac{3\,s}{1}\right) + \frac{1}{2}\left(\frac{6\,m}{s^2}\right)\frac{(3\,s)^2}{1}$$

$$= 12\,m + \frac{1}{2}\left(\frac{6\,m}{s^2}\right)\left(\frac{9\,s^2}{1}\right)$$

$$= 12\,m + 27\,m$$

$$39\,m$$

11.



50 m

$d = -50\,m$

d	V_f
V_0	
a	

(no t)

$V_f^2 = V_0^2 + 2ad$

$= 2\left(-9.8\frac{m}{s^2}\right)\frac{(-50\,m)}{1}$

$V_f^2 = 980\ \frac{m^2}{s^2}$

$V_f = \sqrt{980\frac{m^2}{s^2}}$

$= \boxed{-31.3\frac{m}{s}}$