

CONVERSIONS ACTIVITY - STUDENT PRACTICE

Day #1

Calculate each conversion showing your work as you cancel units. You may use your cards to help you. Make sure your answers are reasonable based on the units used. Write a sentence for four (4) of the problems that explains why your answer is reasonable based on the units.

1. Convert 1.5 yards/sec to ft/sec
2. Convert 3600 ft/min to miles/hr
3. Convert 126 miles/hr to ft/min
4. Convert 18.2 yards/min to ft/sec
5. Convert 24 min to sec
6. Convert 6 in to ft
7. Convert 10 ft to yd
8. Convert 2.5 hr to sec

Traditional Mathematics Review

1. Solve $a^2 + b^2 = c^2$ for a .

2. Solve $v = \pi r^2 h$ for r .

3. Given $SA = 2\pi r^2 + 2\pi r h$, find the height of the cylinder if the $SA = 16\pi \text{cm}^2$ and the $r = 2\text{cm}$.

4. Solve $x^2/a^2 + y^2/b^2 = 1$ for x given $a = 2$, $b = 5$, and $y = 3$.

1. Solve $15x = 18 \cdot 4$

2. Solve $7 \cdot 82 = 16x$

3. Solve $20/2.5 = 4/x$

4. Solve $7/25 = x/15$

Traditional Practice – rearranging equations
Solve each equation below for the given variable:

1. $d = vt$
 $v =$
 $t =$

2. $a = v/t$
 $v =$
 $t =$

3. $d = \frac{1}{2} at^2$
 $a =$
 $t =$

4. $I = P/A$
 $P =$
 $A =$

5. $a = v^2/r$
 $v =$
 $r =$

6. $P = I^2R$
 $I =$
 $R =$

7. $T = 1/f$
 $f =$

8. $d = vt + \frac{1}{2} at^2$
 $v =$
 $a =$

9. $v_f = v_i + at$
 $v_i =$
 $a =$
 $t =$

Traditional Problems:

1. Make r the subject of the formula $V = \frac{4}{3} \pi r^3$
2. Make x the subject of the formula $y = 4 - x^2$
3. Make s the subject of the formula $v^2 = u^2 + 2as$
- 80 4. Make P the subject of the formula $S = P(1 + i)^n$. Try making i the subject.

REARRANGING EQUATIONS TRADITIONAL PRACTICE

Day #5

Solve the following for the variable of interest. Rearrange to solve.

1. Solve for t , $v = \frac{d}{t}$

2. Solve for s , $v^2 = u^2 + 2as$

3. Solve for u , $v^2 = u^2 + 2as$

4. Solve for l , $A = \pi r(l+r)$

5. Solve for d , if $A = \frac{\pi d^2}{4}$ in the equation $S = \frac{FL}{EA}$