**Unit 2: Solving Equations**

**Lesson 3: Literal Equations**

**Objectives:**

* **Students can investigate a problem that involves Literal equations and create an equation in one variable to solve it.**
* **Students can investigate a problem that involves consecutive integers and create an equation in one variable to solve it.**

**Agenda:**

* **Warm up**
* **Quiz**
* **Class Discovery: Literal Equations**
* **Practice:**

**Vocabulary:**

* **Literal equations, Consecutive integers, Odd and Even integers.**

**Focus Questions:**

1. **How can I solve Literal equations in real-life problems?**
2. **How can we express consecutive, even, odd integers?**

**For your entertainment:**

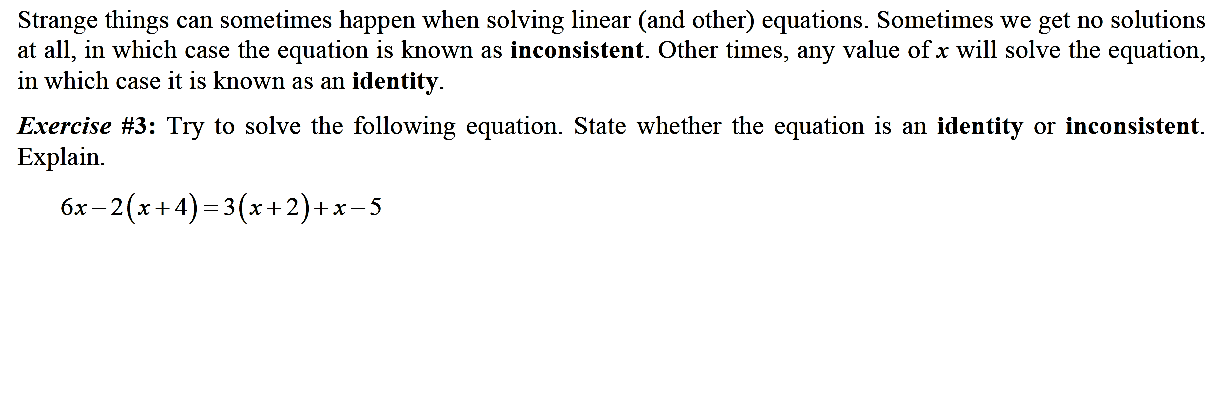
[**http://www.regentsprep.org/regents/math/algebra/AE4/litPrac.htm**](http://www.regentsprep.org/regents/math/algebra/AE4/litPrac.htm)

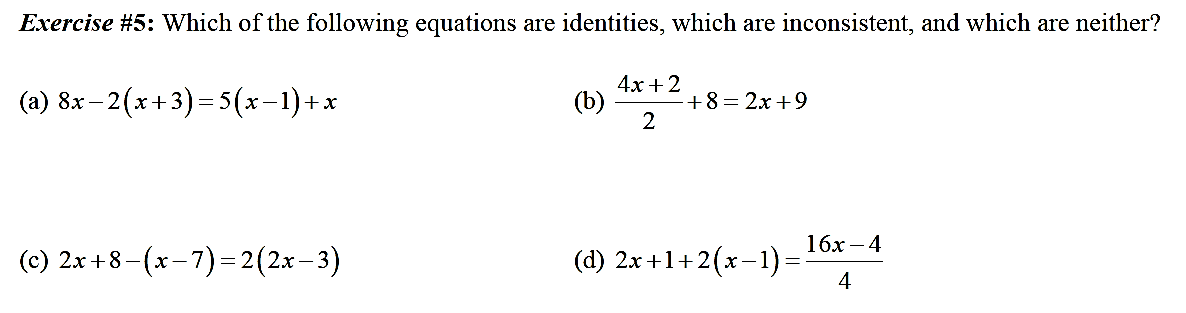
[**http://www.quia.com/cz/43436.html?AP\_rand=1776803402**](http://www.quia.com/cz/43436.html?AP_rand=1776803402)

**Homework: HW2-3**

**Literal Equations:** A **literal** **equation** is an equation where variables represent known values. **Literal** **equations** allow use to represent things like distance, time, interest, and slope as variables in an equation.

**Warm up: Solving equations**





Solving Equations with variables in.

<https://www.youtube.com/watch?v=gqSfw2gmMsghttps>:

Write down the examples and solutions: (At least 2)

|  |  |
| --- | --- |
|  |  |

Time to practice:



1]Solve for h in terms of v

Solve for p in terms of A, r and t.

2] 3] 2A = 3P – 2rt

**Literal equations: Continue**

|  |  |
| --- | --- |
| 1. Solve for  ***p***: | 1. Solve for  ***r*** : |
| 1. Solve for h: | 1. Solve for B: |
| 1. Solve for r in terms of A, P and t. | 6.Solve for (v) in terms of K and m |
| 7.solve for y in terms of x:  2Y – 5x = 10 | 8. Solve for y in terms of x |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 Students were asked to write a formula for the length of a rectangle by using the formula for its perimeter, . Three of their responses are shown below.  I.  II.  III. | Which responses are correct?   |  |  | | --- | --- | | 1) | I and II, only | | 2) | II and III, only | | 3) | I and III, only | | 4) | I, II, and III | |

Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:

Algebra 1– Homework 2-3

1. Solve for x:  2) 

3) Boyle's Law involves the pressure and volume of gas in a container. It can be represented by the formula . When the formula is solved for , the result is

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |

4) Michael borrows money from his uncle, who is charging him simple interest using the formula . To figure out what the interest rate, *r*, is, Michael rearranges the formula to find *r*. His new formula is *r* equals

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |

5) The equation for the volume of a cylinder is . The positive value of *r*, in terms of *h* and *V*, is

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |

6) The formula for electrical power, *P*, is , where *I* is current and *R* is resistance. The formula for *I* in terms of *P* and *R* is

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |

7) The formula for blood flow rate is given by , where *F* is the flow rate,  the initial pressure,  the final pressure, and *r* the resistance created by blood vessel size. Which formula can *not* be derived from the given formula?

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |

**8) Solve for y.**

