

Math 79 Class Exercise: Assessment
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1.
 - (a) $1 + 1 = ?$
 - (b) $5 \times 7 = ?$
 - (c) $7 \times 9 = ?$
 - (d) simplify the expression $1/2 + 3/4$
 - (e) simplify the expression $1/2 + 1/3$
 - (f) simplify the expression $5/7 + 2/3$
2.
 - (a) Calculate the average of the following numbers: $\{1,2,4,5,7,2,2,2,5,3,1,2,4,5,6\}$
 - (b) In the numbers in problem 1, what is the most occurring number?
 - (c) How far off is the number 3 from the average number found in problem 1.
3.
 - (a) $\sqrt{4} = ?$
 - (b) $\sqrt{8} = ?$
 - (c) $\sqrt[3]{8} = ?$
 - (d) $8^{1/3} = ?$
 - (e) $4^{1/2} = ?$
 - (f) if $x^2 = 4$, what does x equal?
 - (g) if $x^{1/3} = 2$, what does x equal?
4.
 - (a) simplify the expression $(x^2y^4x^{-1})^{1/2}$
 - (b) if $x+y=7$ and $x=3$, find y ?
 - (c) if $x+y=2$ and $2x+y=4$, find x and y .
 - (d) Factor $4x^2y + 2xy + 3y^4$
 - (e) If $x^2 - 2x + 1 = 0$, find x ?
5.
 - (a) find the roots to $x^2 + 2x + 1 = 0$
 - (b) If you flip a quarter, what is the probability of obtaining a heads? How's about a tails?
 - (c) If you flip 2 quarters sequentially, what is the probability of obtaining two heads? How's about the first being a heads and the second being a tails?
 - (d) Find a solution for x and y for the following system:

$$x + 2y = 10 \tag{1}$$

$$3x + y = 20 \tag{2}$$

6. (a) Find a solution for x, y, z for the system:

$$x + y + z = 1 \tag{3}$$

$$x + 2y + 4z = 4 \tag{4}$$

$$3x + 2y + z = 1 \tag{5}$$

- (b) Can you find a system of 2 equations in 2 unknowns that have no solutions? Geometrically, what does this correspond to? i.e. what do the lines look like relative to each other in the two dimensional plane.
- (c) Can you find a system of 2 equations in 2 unknowns that have infinitely many solutions? Geometrically, what does this correspond to? i.e. what do the lines look like relative to each other in the two dimensional plane.