

Wk 13 Friday 1st semester final review #1

Show all work on another paper

1. y varies directly as x . If $y=3$ when $x=7$, find x when $y=8$.

2. w is directly proportional to the cube of g . If $w=18$ when g is 3, find w when g is 6.

3. Solve and graph $|2x-1| < 3$ on a number line.

4. Graph $y > -\frac{1}{3}x + 4$

5. Graph $y \leq x - 2$
 $3x - y \geq 1$

6. What are the x -intercepts of the function $f(x) = x^2 + 2x - 3$?

7. What are the zeros of the function $g(x) = 6x^2 - x - 2$?

8. Find the sum of the first 165 terms of $455+445+435+425+\dots$

9. Evaluate $\sum_{w=1}^{244} 3w^2 - 10w - 4$

10. 4,7,10,13,...

a) Write a recursive formula for this sequence

b) Write an explicit formula for this sequence

11. -2,4,-8,16,...

a) Write a recursive formula for this sequence

b) Write an explicit formula for this sequence

12. Simplify $\left(\frac{2x^5y^{-2}z}{5x^2y^5z^{-6}}\right)^{-2}$

13. Solve and graph on a number line:

$$3x^2 < 16x + 12$$

14. Factor $343y^3 + 125$

15. Find all the solutions to: $8x^3 - 27 = 0$