

Math 098, Sample Final Exam 1, Answer Key:

1. $6x^2 - 4x - 2$

2. $3mn^2 - 2 - \frac{1}{m^2n^2}$

3. $y - 5$

4. $\frac{k-4}{k(k+4)}$

5. $\frac{m^7}{n^6}$

6. $\frac{b^9}{3a^8}$

7. $-\frac{1}{6}$

8. $x + 5$

9. $5t^6\sqrt{2t}$

10. 3.9671×10^5

11a) $(5r + 2)(r + 2)$

11b) $(b + 2)(a + 5)$

12. $\frac{5}{2}$

13. No Solution

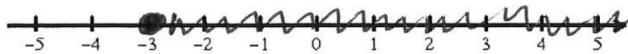
14. $t = 5, t = -3$

15. $\frac{5}{3}, -3$

16. $A = \frac{n(B+d)}{2}$

17. $x = -1, x = \frac{5}{2}$

18. $x \geq -3$

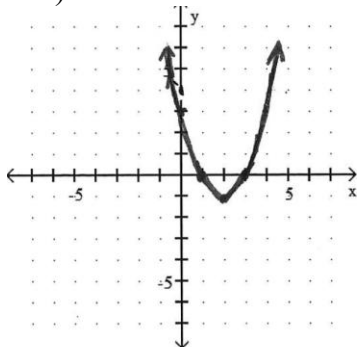


19a) $(1,0), (3,0)$

19b) $(0,3)$

19c) $(2, -1)$

19d)



20a) $(-\frac{1}{4}, 0)$

20b) $(0, \frac{1}{3})$

20c) $y = \frac{4}{3}x + \frac{1}{3}$

21. \$ 8.33

22. $x = 4$

23a) $-\frac{11 \text{ degree Celsius}}{20 \text{ feet}}$

23b) For every 20 feet below surface the temperature drops by 11 *degree Celsius*.

24a) $-\frac{5}{3}$

24b) $y = -\frac{5}{3}x + 1$

24c) $\frac{3}{5}$

25. $(3, -2)$

26. $S + F = 40$; $70S + 90F = 3,100$

27. 13.5 feet

28. 57 mph, 62 mph