

## Math 098, Sample Final Exam 2, Answer Key:

1.  $-9x^2 + 13x - 3$

2.  $\frac{k^8}{n^{12}}$

3.  $y - 4$

4.  $\frac{3R-2}{14R^{12}}$

5.  $y - 3$

6.  $5x^6y^2\sqrt{3y}$

7.  $3.358 \times 10^7$

8.  $x = \pm 2$

9.  $x = 9$

10.  $-\frac{1}{3}$

11.  $3(x + 3)(x - 1)$

12.  $(3x + 2y^2)(3x - 2y^2)$

13.  $x = \frac{3}{2}$

14.  $x = 0, x = 4$

15.  $x = 36$

16.  $x = -\frac{1}{3}$

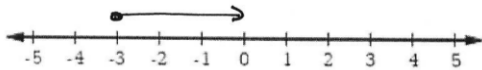
17a)  $y = kx$

17b)  $k = 9$

17c)  $x = 12$

18a)  $x \geq -3$

18b)



19. 495 grams

20. Length: 40 inches, Width: 15 inches

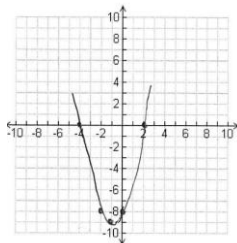
21. 70 meters

22a)  $(2, 0), (-4, 0)$

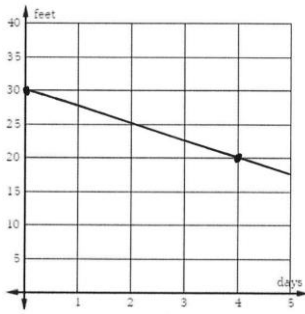
22b)  $(0, -8)$

22c)  $(-1, -9)$

22d)



23a)



23b) 6 days

23c) The water level drops 5 feet per day.

24.  $(7, -8)$

25. 80%

26.  $x = 4.35$ ,  $x = 1.15$

27a)  $y = 3x + 13$

27b)  $-\frac{1}{3}$

28.  $w = \frac{P-2l}{2}$

29.  $x + 60 = y$ ;  $0.2x + 42 = 0.5y$