FRESHMAN ACCELERATED MATH SPRING FINAL EXAM REVIEW ANSWERS

1a. UP, MIN	7a. $(x-5)(x-2)$	12f. $14m^{25}n^{6}$
1b. DOWN, MAX	7b. $(x+7)(x-2)$	12g. $10a^{31}b^{4}$
1c. DOWN, MAX	7c. $(x+3)(x-3)$	12h. $-4a^{10}b^{5}$
1d. DOWN, MAX	7d. $6x(x-7)$	12i. 20
2a. top right graph	8a. add and subtract LIKE TERMS	12j. 8
2b. bottom left graph	8b. same base, add exponents	13a. m = 5
2c. top left graph	8c. multiply exponents	13b. $x=\frac{25}{18}$
2d. bottom right graph	8d. subtract exponents/cancel	13c. x = 5
3a. bottom left graph	9a. $36x^{16}$	13d. $x=\frac{52}{5}$
3b. bottom right graph	9b. $-13x^{8}$	13e. x = 256
3c. top left graph	9c. $-4x^{3}$	13f. y = 4, -4
3d. top right graph	9d. $x^{6}y^{12}z^{24}$	13g. x = 6, -6
4a. opens up LOS: x= -2 V: (-2, 0) X-int: (-2, 0) Y-int: (0, 4)	9e. $48x^{5}y^{8}$	13h. y = -4, -6
	9f. $\frac{x^{5}}{5}$	13i. x = 5, -5
4b. opens up LOS: x=2 V: (2, -16) X-int:(6, 0) (-2, 0)Y-int: (0, -12)	9g. $-4y^{8}$	13j. x = 3, 1/3
	9h. $432x^{8}z^{8}$	14-1. $(2x+9)(2x-9)$
4c. opens up LOS: x = 2 V: (2, -1) X-int: (3, 0) (1, 0) Y-int: (0, 3)	9i. $-2x^{24}$	14-2. $(x+5)(x+2)$
	9j. $x^{8}y^{4}z^{6}$	14-3. $4(x-5)(x+2)$
4d. opens up LOS: x = 0 V: (0, -9) x-int: (-3, 0) (3, 0)y-int: (0, -9)	9k. $15x^{9}$	14-4. $(3x-1)(x+1)$
	9l. x^{20}	14-5. $(3x-2)(2x+3)$
5. The x-intercepts for each.	9m. -1	14-6. $2(x+2)(x-2)$
6a. $x=\pm\sqrt{7}$	9n. 1	15-7. $3x^{2}-7x+2$
6b. x = 15, x = -1	10. Take out the "partners" on the coefficient. Divide the exponents by 2.	15-8. $x^{2}-3x+2$
		15-9. $x^{2}-25$
6c. x = 2, x = 1	11. Take out "triplets" on the coefficient. Divide the exponents by 3.	15-10. $x^{2}+6x+9$
		15-11. $x^{2}-2x+1$
6d. x = -6	12a. $9a^{2}b^{8}$	15-12. $-16x^{2}-32x-16$
6e. x = -1/2 x = -8	12b. $-3a^{3}b^{9}$	END OF ALGEBRA SECTION.
6f. x = 2, x = -2	12c. 20	
6g. x = 1, x = -6	12d. $6\sqrt{2}$	
6h. x = 2/3, x = -1	12e. abc^{4}	

Geometry Section

1. Concave-has exterior diagonals, convex doesn't	24. yes	50. 13 mm
2. C	25. 31+17=48. They need to be increased so their sum is bigger than 54.	51. A
		52. 41 degrees
3. 5 in.	26. segment CB	53. 76 degrees
4. segment VW	27. l > k > j	54. 17 degrees
5. Radius- A segment with endpoints at the center and on the circle.	28. B	55. no. x = 93 but it should be 90 if q is tangent.
	29. D	56. 98 inches
6. arc BC = arc DE arc CG = arc FC arc BD = arc CE	30. C	57. 67 degrees
	31. BD = BD (reflexive) $\Delta ABD \cong \Delta CBD$ SSS $\angle ABD \cong \angle CBD$ CPCTC	58. yes. Angle SQR=60 and angle SRQ=60 so $\overline{SQ} \cong \overline{SR}$.
7. chord interects at 2 pts. Tangent intersects at 1 pt.	32. AC = AC (reflexive) $\Delta ABC \cong \Delta ADC$ SAA $\overline{AD} \cong \overline{AB}$ CPCTC	59. 34 degrees
		60. 31 degrees
8.	33. 60 sides	61. 46 degrees
9.	34. 720 degrees	62. 20π
10.	35. 92 degrees	63. $79/\pi$
11.	36. 9 sides	64. 6π or about 18 inches
12. 74 degrees	37. 6 sides	65. 42π or about 126 inches
13. x = 6	38. 36 sides	66. The degree measure is from 0 and 360 degrees, meaning the section of the circle. The arc length is proportional to the degree measure and depends on the radius of the circle.
14. x = 3	39. 30 sides	67. 2π feet
15. If a triangle is equilateral, then 2 of the angles measure 60 (true).	40. 18 sides	68. $28\pi/3$ cm
	41. B = C = 138, D = 42	69. 14π cm
16. 4 = 2, 5, 7, 10, 12, 13, 15	42. C	
17. x = 7	43. 36 cm	
18. -3n	44. segments OD, AO, OC	
19. n-3	45. 114 degrees	
20. 6: 15, 35: 595, n: $\frac{n(n-1)}{2}$	46. 130 degrees	
21. 58 degrees	47. 140 degrees	
22. x = 18	48. x = 27 and y = 54 degrees	
23. 11 inches	49. 6 inches	