

Math 099 Winter 2009 form A Answers

1. $\frac{21v^8}{5m^8}$

16. $\log_a\left(\frac{x^2}{y}\right)$

2. $k^{7/5}$

17. $y = -\frac{3}{8}x + \frac{1}{4}$

3. $4n^4$

18. parallel C
perpendicular B

4. $3x^4y^2\sqrt{3y}$

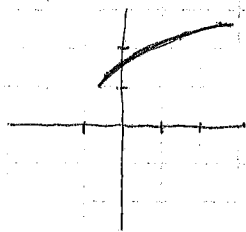
5. $\frac{3x+1}{x-1}$

19a. 3

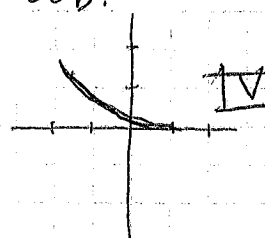
19b. 0, 1

6. $\frac{5x+15}{2x+5}$

20a.



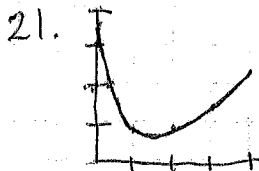
20b.



7. $\frac{x^2+7x+3}{x^2+x}$

8. $t^2 - 9t + \frac{81}{4} = \left(t - \frac{9}{2}\right)^2$

9. $y = -5 \pm \sqrt{14}$



22. y varies inversely with x B

10. $x = -4$ or $x = 2$

y varies directly with the square root of x D

11. $k = 0$
($k = -\frac{3}{5}$ is extraneous)

23. $A + B = 12000$
 $.06A + .04B = 560$

24. 16 hours ($k = 240$)

12. $t = 5$

25 a. 16 feet
b. ≈ 1.72 feet

13. $x \approx 9.445$

14. $x = -1, y = 6$

26. a. \$1500
b. 40 cases
c. \$6000

15. Second # 14

$f(5) = \frac{1}{2}$

$x = -5$

$f(2t-3) = \frac{2}{t}$

domain: $x \neq -3$

27. a. 400,000
b. 462,000
c. (early in) 2017

15. $\log_7 4k = 10 - y$