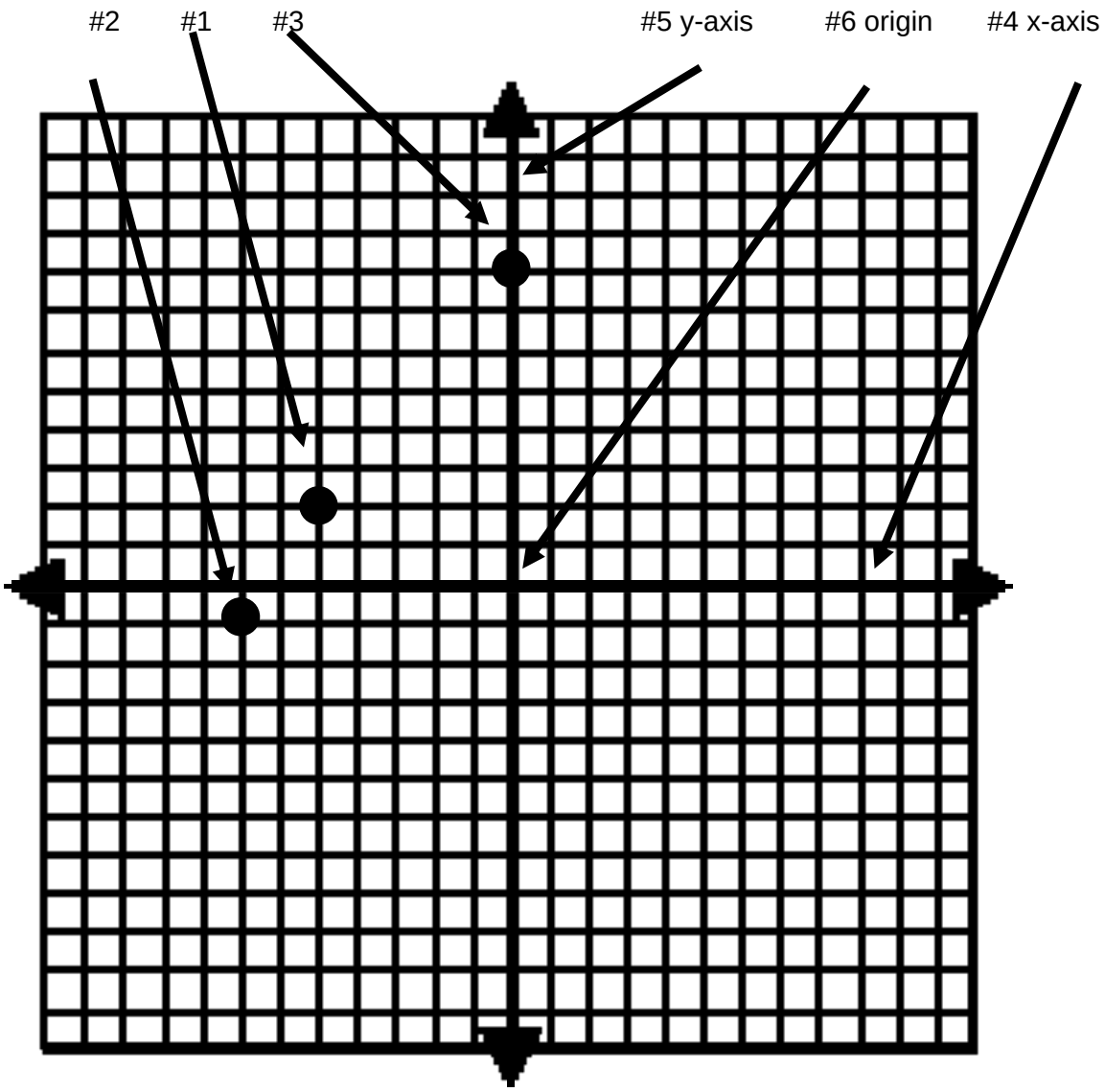
FINITE MATH – REVIEW for Test 2 – ANSWERS



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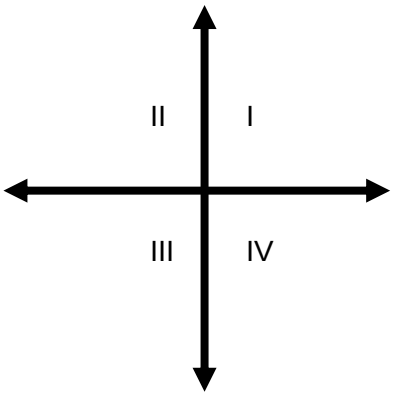


8. $d = \sqrt{(9-7)^2 + (5--1)^2} = \sqrt{(2)^2 + (6)^2} = \sqrt{4+36} = \sqrt{40} \approx 6.32$

$5 = \sqrt{(a-2)^2 + (7-3)^2}$

$5 = \sqrt{(a-2)^2 + 16}$

$25 = (a-2)^2 + 16$

9. $9 = (a-2)^2$

$\pm 3 = a - 2$

$a = 3 + 2 = 5$

or $a = -3 + 2 = -1$

10. Center = $(-2,0)$ Radius = $\sqrt{16} = 4$

11. $(x-4)^2 + (y+2)^2 = 36$

12. First find the radius. $r = \sqrt{(2--5)^2 + (7-0)^2}$ … The equation is
$r = \sqrt{98}$

$(x+5)^2 + y^2 = 98$

(This problem does appear twice in different forms.)

13. $m = \frac{-2}{4}$ *or* $\frac{-1}{2}$ (down 2 and over 4)

14. $m = \frac{1--2}{11-4} = \frac{3}{7}$

15. $m = 4$ (the number by "x")

16. $m = \frac{-3}{5}$ (the number by the parentheses)

17. undefined or infinite

18. $m = 0$

19. $-7/2$ (same as given line)

20. $2/7$ (negative reciprocal – upside down and opposite sign)

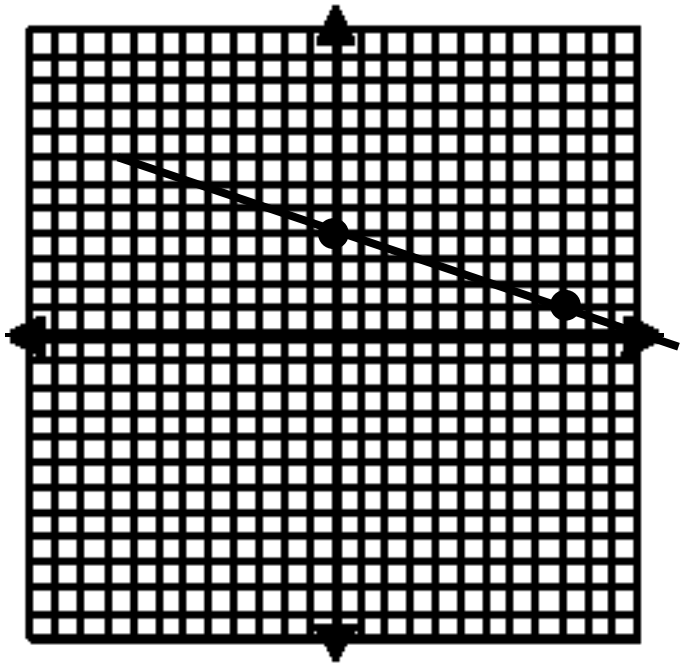
21. $y = \frac{3}{5}x + 6$

22. $y + 2 = \frac{-1}{2}(x - 4).$

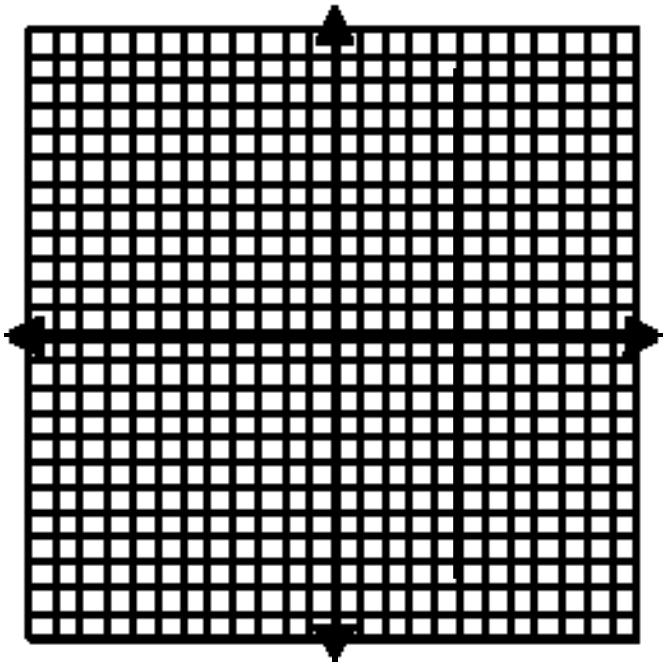
23. $y = \frac{-5}{3}x - 2$

24. $y - 0 = \frac{-4}{7}(x - 4)$ or $y = \frac{-4}{7}(x - 4)$

25. $y = \frac{-3}{9}x + 4$



26. $x = 5$



27. $m = \frac{1 - -2}{-7 - 4} = \frac{3}{-11}$ *or* $\frac{-3}{11}$ *or* $-\frac{3}{11}$

28. $y + 2 = \frac{-3}{11}(x - 4)$ or $y - 1 = \frac{-3}{11}(x + 7)$

29. $g(-3) = 2(-3)^2 - 5 = 2 \bullet 9 - 5 = 18 - 5 = 13$

30. $2x-1=17$
$2x=18$
$x=9$

31. $k(m(5))=k(25)=28$

32. $m(k(5))=m(8)=64$

33-a. $C(x)=172x+165000$

33-b. $R(x)=579x$

33-c. $P(x)=579x-(172x+165000)$
$P(x)=407x-165000$

33-d. $P(4000)=1463000$ … so a profit of $1,463,000

34-a. $d=\frac{15000-3000}{8}=1500$

34-b. $V(x)=15000-1500x$

34-c. $V(5)=7500$ … $7500