



ANSWERS TO TESTS FOR GAITHER/LETO INVITATIONAL JANUARY 27, 1996

CALCULUS

- 1. D
- 2. B
- 3. C
- 4. D
- 5. B
- 6. D
- 7. B
- 8. C
- 9. D
- 10. B
- 11. D
- 12. E
- 13. A
- 14. A
- 15. E
- 16. B
- 17. B
- 18. A
- 19. B
- 20. E
- 21. A
- 22. D
- 23. B
- 24. C
- 25. C
- 26. D
- 27. E
- 28. E
- 29. B
- 30. C

PRECALCULUS

- 1. A
- 2. D
- 3. B
- 4. E
- 5. A
- 6. C
- 7. B
- 8. A
- 9. B
- 10. D
- 11. D
- 12. C
- 13. B
- 14. E
- 15. C
- 16. D
- 17. E
- 18. B
- 19. A
- 20. E
- 21. C
- 22. C
- 23. D
- 24. C
- 25. B
- 26. B
- 27. C
- 28. ~~E~~ D
- 29. A
- 30. C

ALGEBRA 2

- 1. D
- 2. C
- 3. B
- 4. D
- 5. D
- 6. C
- 7. B
- 8. D
- 9. C
- 10. B
- 11. A
- 12. D
- 13. B
- 14. D
- 15. D
- 16. B
- 17. B
- 18. A
- 19. A
- 20. D
- 21. B
- 22. B
- 23. B
- 24. A
- 25. B
- 26. C
- 27. C
- 28. D
- 29. E
- 30. A

GEOMETRY

- 1. A
- 2. A
- 3. B
- 4. C
- 5. D
- 6. D
- 7. C
- 8. B
- 9. D
- 10. E
- 11. A
- 12. E
- 13. C
- 14. C
- 15. A
- 16. B
- 17. B
- 18. B
- 19. D
- 20. C
- 21. D
- 22. D
- 23. A
- 24. D
- 25. A
- 26. B
- 27. B
- 28. B
- 29. E
- 30. C

ALGEBRA 1

- 1. D
- 2. A
- 3. B
- 4. A
- 5. B
- 6. D
- 7. C
- 8. C
- 9. D
- 10. A
- 11. B
- 12. C
- 13. E
- 14. D
- 15. C
- 16. B
- 17. A
- 18. A
- 19. B
- 20. D
- 21. D
- 22. D
- 23. A
- 24. E
- 25. C
- 26. C
- 27. A
- 28. C
- 29. B
- 30. C

Baithor - Leto Invitational Geometry Individual

1/27/96



- A 1. $x+1=3x-6$ $2x=7$ $x=7/2$
- A 2. centroid
- B 3. $(7/2)-7 = 21/2-7 = 21-14 = 7$
- C 4. $2x-2+xy-y$ $2(x-1)+y(x-1) = (x-1)(2+y)$
- D 5. $\frac{n(3n-1)}{2} = \frac{5(15-1)}{2} = 35$
- D 6. octagon
- C 7. $m\angle 2 + m\angle 4 = 180$
 $m\angle 3 + m\angle 5 = 180 \therefore C$
- B 8. $8.50(24+x) + 15x = 1050$ $80400 + 850x + 1500x = 105000$
 $2350x = 84600$ $x = 36$ $36+60 = 96$
- D 9. $10y^2 - 5x + 1 = 2x^2 + x + 10$ $8x^2 - 6x - 9 = 0$ $(4x+3)(2x-3)$ $x = -3/4, x = 3/2$
- E 10. slope between (0,10) and (3,8) = $-\frac{2}{3}$
 slope between (3,8) and (1,5) = $3/2 \therefore \perp$
- A 11. $436+x = 80$ $436+x = 480$ $x = 44$
- E 12. $x-3 = \pm\sqrt{24}$ $x = 3 \pm \sqrt{24}$ $x = 3 \pm 2\sqrt{6}$
- C 13. $\frac{2\sqrt{3}}{4}, \frac{9\sqrt{3}}{4}$
- C 14.
- A 15. $\sqrt{5} + \sqrt{29} + \sqrt{2}$
- B 16. $r = 3$
 $x^2 = 9 - 4 = 5$ $x = \sqrt{5}$
- B 17. $1/2(4)(17) = 34$
- B 18. $x^2 + 4x + 4 = 2x + 28$ $x^2 + 2x - 24 = 0$ $(x+6)(x-4) = 0$ $x = -6$ $x = 4$ *-6 is extraneous*
- D 19. $\frac{3}{5} + \frac{4}{5} + \frac{3}{4} = \frac{12+16+15}{20} = \frac{43}{20}$
- C 20. $x = \frac{4k}{n}$ $10 = \frac{6k}{3}$ $k = 5$ $x = \frac{5(5)(4)}{5} = 20$
- D 21. $4n^2(8-\pi)$
- D 22. $i = (8n)(4n) = 32n^2$ $ii = 32n^2 - 4r^2\pi$ $iii = (32n^2 - 8\pi r^2) = 8n^2(4-\pi)$
- A 23.
- D 24. $\binom{100}{2} = \frac{100 \cdot 99}{2} = 99 \cdot 50 = 4950$
- A 25. $(12)(8)(-4) = -384$ B 26. $\frac{6}{5} + \frac{21}{8} = \frac{48+105}{40} = \frac{153}{40}$ **(193)**
- B 27. $\frac{x}{6} + \frac{x}{5} - \frac{x}{8} = 1$ $20x + 24x - 15x = 120$ $29x = 120$ $x = \frac{120}{29} = 3\frac{4}{29}$
28. $3/4(144\pi) = 108\pi + 2\pi = 110\pi$
- E 29. all are true,
- C 30. area = 8 $\diamond = \frac{1}{2}(2)(4) = 1$ $1 \times 2 = 2$ $\frac{2}{8} = \frac{1}{4}$