

Math 173

Answers of Suggested Geometry Problems

G.1 Triangles

1. $\angle BAC = 45^\circ$ 3. $x = 35^\circ$ 4. $x = 26.5^\circ$ 21. $\angle A = 40^\circ, \angle B = 20^\circ, \angle C = 120^\circ$
24. No, a triangle cannot have two angles of size larger than 90° since the sum of the angles would then be more than 180° .
28. $x = 109^\circ$ 29. $x = 110^\circ$ 30. $x = 133^\circ, y = 99^\circ$ 31. $x = 135^\circ, y = 40^\circ$ 32. $x = 36^\circ$
33. $x = 30^\circ, y = 110^\circ, z = 140^\circ$ 34. $x = 127^\circ$ 35. sum = 180° 36.(c) $x \approx 34.07$
38. $PR = \sqrt{657} \approx 25.63$ cm 40. $x = 3\sqrt{2}, y = \frac{3\sqrt{2}}{2}$
42. $AD = 5$ cm, $DC = \sqrt{39} \approx 6.2$ cm 44. $BD = 15$ cm, $BH = 17$ cm 48. $d = \sqrt{493}$

G.2 Similar Triangles

11. $x = \frac{135}{7} \approx 19.29$ 12. $x = 14$ 13. $x = 18$ 14. $x = 3, y = 13.5$ 17. $y = \frac{25}{13}, z = \frac{144}{13}$
18. $x = 40$ 19. $x = 18$ 20. $x = 4$ 21. $x = 2$ 23. perimeter = 36
24. height = 80 m 32. 16 : 1 44. 3 : 1 54. $DF = 1.2$ cm 55. ~~$CF = 7\sqrt{2} \approx 9.9$ cm~~
 $CF = 8\sqrt{2}$