Algebra 1 3207
Chapters 10 and 11 Review

Name: _____

10.1 & 10.2 – Describe if each graph is narrow or wide.

1. $y = 3x^2$ 2. $y = -0.5x^2$ 3. $y = x^2 - 4$ 4. $y = 2x^2 + 5$

_____ _____ _____ _____

Identify the axis of symmetry ($x = \frac{-b}{2a}$). Then, find the vertex (substitute the x and find y).

5. $y = 3x^2$ 6. $y = 3x^2 + 6x$ 7. $y = -x^2 + 2x + 1$

x = _____ x = _____ x = _____

vertex = _____ vertex = _____ vertex = _____

10.3 – Find the square roots of each number.

8. 25 9. 64 10. .81 11. 900

_____ _____ _____ _____

12. $\frac{4}{9}$ 13. $\frac{25}{36}$ 14. $\frac{16}{25}$ 15. $\frac{1}{9}$

_____ _____ _____ _____

11.1 – Simplify each radical expression. No decimal answers!

16. $\sqrt{32}$ 17. $\sqrt{147}$ 18. $5\sqrt{70}$ 19. $2\sqrt{27}$

_____ _____ _____ _____

20. $2\sqrt{5} \cdot 2\sqrt{5}$

21. $\sqrt{15} \cdot \sqrt{6}$

22. $2\sqrt{18} \cdot \sqrt{8}$

23. $3\sqrt{5} \cdot 2\sqrt{5}$

_____ _____ _____ _____

10.4, 10.5 & 10.7 – Solve using factoring, finding the square roots, or using the quadratic formula.

24. $x^2 = 36$

25. $x^2 + x - 2 = 0$

26. $c^2 - 100 = 0$

_____ _____ _____

27. $2x^2 - 54 = 284$

28. $h^2 + 4 = 0$

29. $x^2 + 6x - 2 = 0$

_____ _____ _____

11.2 – Determine whether the given sides lengths are sides of a right triangle.

30. 4, 5, 7

31. 6, 8, 10

32. $\sqrt{3}, \sqrt{4}, \sqrt{5}$

_____ _____ _____

Find the missing side length of each right triangle.

33. a = 19, b = 45, c = _____

34. a = _____, b = 24, c = 39

35. a = 42, b = 37, c = _____

36. a = 36, b = 15, c = _____

11.3 – Find the distance and midpoint of each pair of points. $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$,

$d = \sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$

37. (1, 3) and (2, 8)

d = _____ m = _____

38. (6, -2) and (-7, -10)

d = _____ m = _____

39. (11, 7) and (-7, -11)

d = _____ m = _____

40. (0, 6) and (-2, 9)

d = _____ m = _____

11.4 – Simplify each expression.

41. $3\sqrt{24} - 2\sqrt{6}$

_____

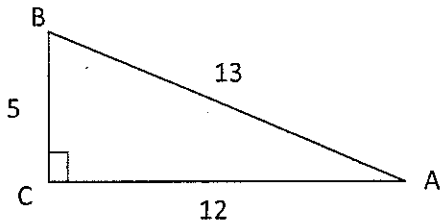
42. $\sqrt{27} + \sqrt{3}$

_____

43. $(3\sqrt{2} - \sqrt{5})(2\sqrt{5} + 4\sqrt{2})$

_____

11.7 – Use $\triangle ABC$ to evaluate each expression.



44. sin A 42. cos A 43. tan A

44. sin B 45. cos B 46. tan B

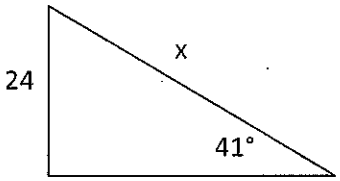
Evaluate each expression. Round to the nearest ten-thousandth.

47. tan 58 48. cos 36 49. tan 32 50. sin 27

51. cos 42 52. sin 63 53. sin 23 54. cos 45

Find the value of x to the nearest tenth.

55.



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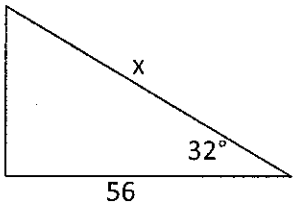

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