

Geometry Final Exam Review Answer Key–2018

1. $x = 12.17$
2. $x = 7$
3. $x = 7$
4. $x = 91, y = 30$
5. $\angle PBQ = 32^\circ, BQ = 12.5$ units
6. $MN = 5$ in.
7. $P = 42$ units
8. height = 35.6 ft
9. no
10. area = $5\sqrt{39}$ units², 31.2 units²
11. altitude = $10\sqrt{3}$ cm
12. perimeter = 36 units
13. $x = 12$ units, $y = 12\sqrt{3}$ units
14. $x = 6\sqrt{2}$ units, $y = 6$ units
15. $x = 29$

$\sin A = \frac{20}{29}$	$\cos A = \frac{21}{29}$	$\tan A = \frac{20}{21}$
$\sin B = \frac{21}{29}$	$\cos B = \frac{20}{29}$	$\tan B = \frac{21}{20}$
16. $\cos x = \frac{12}{13}, \sin x = \frac{5}{13}$
17. a. 41° , b. 46° , c. 39°
18. a. 16.2 units, b. 6.6 units, c. 8.5 units
19. 64.3 m
20. $\cos X = \frac{12}{15}$
21. see student work
22. see student work, answer should be 7.7 ft
23. see student work
24. a. False, $\angle BGC = 36^\circ$, b. False, $AE = CD$, c. True, d. False, $\angle DGC = 72^\circ$, e. False, $EG \cong AG$ f. True
25. $x = 9.7$ units
26. $RF = 8$ units
27. perimeter = 48.6 units
28. $(x + 4)^2 + (y - 4)^2 = 16$
29. $(x - 7)^2 + (y - 7)^2 = 25$
30. area = 132.7 cm²
31. area = 100π units²
32. arc length = $\frac{13\pi}{4}$ m
33. 4:7
34. radius = 6 m, $m\angle AOC = 120^\circ$, sector area = 12π or 37.7 m²
35. $m\angle XPY = 56^\circ, m \text{ arc } XZ = 152^\circ$
36. area rhombus = 24 units²
37. area trapezoid = 28 units²
38. area = 120 units²
39. area circle = 12.25π cm²,
area shaded region = 22.6 cm² (depending on rounding)
40. radius = 34 units, area hexagon = 3003.4 units²
area shaded region = 628.3 units²
41. 87.17 kg
42. 26.2 ft² \rightarrow 2.93 yd² needed
43. 11781 gallons
44. 15825 - 15829 lbs, depending on rounding
45. 572.1 in³
46. 4188.8 m³
47. height = 17.0 cm
48. the volume of the prism is larger by 4 in³
49. 94 ice cubes
50. radius = 6.2 cm
51. $330^\circ, \frac{11\pi}{6}$
52. $225^\circ, \frac{5\pi}{4}$
53. $315^\circ, \frac{7\pi}{4}$
54. $150^\circ, \frac{5\pi}{6}$
55. a. $\angle A = 30^\circ, \angle B = 60^\circ$
b. $\angle A = 240^\circ, \angle B = 210^\circ$
c. sine and cosine of complementary reference angles are equal
56. $\theta' = 45^\circ, \sin \theta' = -\frac{\sqrt{2}}{2}, \cos \theta' = \frac{\sqrt{2}}{2}, \tan \theta' = -1$
57. tan is undefined at 90° and 270°
58. Quadrant I, cos is +, sin is +, tan is +
Quadrant II, cos is -, sin is +, tan is -
Quadrant III, cos is -, sin is -, tan is +
Quadrant IV, cos is +, sin is -, tan is -
59. $\cos -45^\circ = \frac{\sqrt{2}}{2}$
60. $\tan 210^\circ = \frac{\sqrt{3}}{3}$
61. $\cos 510^\circ = -\frac{\sqrt{3}}{2}$