Trig #1 Pre Calc

The terminal side of an angle θ in standard position passes through the given point. Find $\sin\theta$, $\cos\theta$, $\tan\theta$ in simplest radical form.

1. $(5,12)$
2. $(-6,-8)$
3. $(10,-24)$
4. $(-5,10)$
5. $(-3,4)$
6. $(2,-2)$
7. $(-12,5)$
8. $(-2,3)$
9. $(5,2)$
10. $(4,-5)$
11. $(-24,7)$
12. $(6,-3)$

θ is the measure of an angle in standard position that lies in the given quadrant. Find the required trig function.

13. $\sin\theta = \frac{1}{2}, quad\ II, \tan\theta$
14. $\cos\theta = -\frac{2}{9}, quad\ II, \tan\theta$
15. $\tan\theta = -\frac{3}{5}, quad\ II, \cos\theta$
16. $\sec\theta = 4, quad\ IV, \sin\theta$
17. $\cos\theta = \frac{\sqrt{3}}{2}, quad\ IV, \tan\theta$
18. $\tan\theta = -\frac{2}{5}, quad\ II, \cos\theta$
19. $\tan\theta = \frac{4}{5}, quad\ I, \sin\theta$
20. $\csc\theta = -\frac{3}{2}, quad\ III, \tan\theta$
21. $\cos\theta = -\frac{\sqrt{2}}{2}, quad\ III, \tan\theta$
22. $\cot\theta = -\frac{5}{12}, quad\ IV, \sec\theta$
23. $\sin\theta = -\frac{12}{13}, quad\ III, \cos\theta$
24. $\tan\theta = -1, quad\ II, \sin\theta$

Given the values of two trigonometric functions, state the quadrant(s) in which the angle lies.

25. $\sin\theta = \frac{3}{5}, \tan\theta = -\frac{3}{4}$
26. $\csc\theta = -\frac{13}{12}, \cos\theta = \frac{5}{13}$
27. $\tan\theta = -\frac{16}{63}, \csc\theta = -\frac{65}{16}$
28. $\sec\theta = \frac{29}{21}, \cos\theta = \frac{21}{29}$
29. $\sin\theta = -\frac{7}{25}, \cot\theta = \frac{24}{7}$
30. $\cot\theta = -\frac{60}{11}, \tan\theta = -\frac{11}{60}$

Find the measure of the reference angle for each of the following.

31. 135° 32. 150° 33. 400° 34. 168° 35. 253° 36. 59°

37. -320° 38. -127° 39. 329° 40. -251° 41. 178° 42. -93°

Rewrite each function as a function of a positive acute angle.

43. $\sin 240^\circ$ 44. $\csc 210^\circ$ 45. $\sec 240^\circ$ 46. $\tan 120^\circ$

Give the exact values of each of the following.

47. $\sin 240^\circ$ 48. $\cos 300^\circ$ 49. $\tan 120^\circ$ 50. $\sin 90^\circ$ 51. $\cos 180^\circ$

52. $\sec 150^\circ$ 53. $\tan 315^\circ$ 54. $\csc 210^\circ$ 55. $\cos 135^\circ$ 56. $\sin 270^\circ$

57. $\tan 390^\circ$ 58. $\sin 480^\circ$ 59. $\cos 570^\circ$ 60. $\tan 180^\circ$ 61. $\csc 240^\circ$

Evaluate the following.

62. $\sin 150^\circ + \cos 270^\circ - \tan 225^\circ$

63. $\dfrac{\sin 210^\circ - \sin 240^\circ}{\cos 210^\circ - \cos 240^\circ}$

64. $\dfrac{\csc 225^\circ - \cos 315^\circ}{\tan 330^\circ \sin 240^\circ}$