

## Week 1 Practice-Ref. Ch. 1-2, 1-3

Date \_\_\_\_\_ Period \_\_\_\_\_

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**In each triangle ABC, angle C is a right angle. Find the value of the trig function indicated.**

1) Find  $\cot A$  if  $c = 10$ ,  $b = 8$

2) Find  $\cos A$  if  $a = 5$ ,  $b = 12$

3) Find  $\tan A$  if  $a = 3\sqrt{11}$ ,  $c = 18$

4) Find  $\cos A$  if  $b = 6$ ,  $a = 6\sqrt{3}$

5) Find  $\tan A$  if  $a = 8$ ,  $c = 17$

6) Find  $\sec A$  if  $c = 5\sqrt{5}$ ,  $a = 11$

7) Find  $\sin A$  if  $b = 8$ ,  $c = 10$

8) Find  $\sec A$  if  $c = 5$ ,  $b = 4$

9) Find  $\csc A$  if  $b = 5\sqrt{13}$ ,  $c = 19$

10) Find  $\csc A$  if  $a = 15$ ,  $c = 17$

11) Find  $\csc A$  if  $b = 5$ ,  $a = 10$

12) Find  $\cot A$  if  $a = 8$ ,  $c = 17$

**Find the value of the trig function indicated. Exact values.**

13) Find  $\cos \theta$  if  $\tan \theta = \frac{24}{7}$

14) Find  $\sec \theta$  if  $\cot \theta = \frac{22\sqrt{5}}{15}$

15) Find  $\sec \theta$  if  $\sin \theta = \frac{7}{25}$

16) Find  $\tan \theta$  if  $\sin \theta = \frac{12}{13}$

17) Find  $\cot \theta$  if  $\sin \theta = \frac{7}{25}$

18) Find  $\cos \theta$  if  $\sec \theta = \frac{5}{4}$

19) Find  $\sin \theta$  if  $\csc \theta = \frac{5}{4}$

20) Find  $\csc \theta$  if  $\sin \theta = \frac{3}{7}$

21) Find  $\cot \theta$  if  $\csc \theta = \frac{\sqrt{10}}{3}$

22) Find  $\sec \theta$  if  $\cos \theta = \frac{15}{17}$

23) Find  $\csc \theta$  if  $\tan \theta = \frac{24}{7}$

24) Find  $\cot \theta$  if  $\cos \theta = \frac{7}{25}$

25) Find  $\tan \theta$  if  $\sin \theta = \frac{2\sqrt{5}}{5}$

26) Find  $\sin \theta$  if  $\tan \theta = \frac{\sqrt{7}}{3}$

27) Find  $\tan \theta$  if  $\csc \theta = \sqrt{2}$

28) Find  $\tan \theta$  if  $\cos \theta = \frac{3}{5}$

29) Find  $\cos \theta$  if  $\sin \theta = \frac{5}{13}$

30) Find  $\csc \theta$  if  $\cot \theta = \frac{1}{2}$

31) Find  $\sin \theta$  if  $\csc \theta = \frac{19\sqrt{15}}{60}$

32) Find  $\sec \theta$  if  $\sin \theta = \frac{3}{5}$

Find each angle measure to the nearest degree.

33)  $\sin Z = 0.9511$

34)  $\sin U = 0.8572$

35)  $\tan V = 0.9325$

36)  $\cos Z = 0.0872$

37)  $\sin Z = 0.9925$

38)  $\sin U = 0.8829$

In each problem, angle C is a right angle. Solve each triangle rounding answers to the nearest tenth.

39)  $m\angle A = 60.4^\circ$ ,  $c = 13$

40)  $m\angle A = 47^\circ$ ,  $c = 5.5$

41)  $a = 12.1$ ,  $m\angle B = 26.3^\circ$

42)  $b = 3$ ,  $m\angle B = 15^\circ$

43)  $m\angle A = 67^\circ$ ,  $a = 14$

44)  $c = 10$ ,  $m\angle B = 48.1^\circ$

45)  $m\angle B = 68.1^\circ$ ,  $c = 11$

46)  $m\angle B = 45^\circ$ ,  $a = 15$

47)  $b = 2.1$ ,  $m\angle B = 28^\circ$

48)  $m\angle B = 40^\circ$ ,  $a = 3$

49)  $a = 4$ ,  $b = 4$

50)  $a = 8$ ,  $m\angle A = 24^\circ$

51)  $a = 11$ ,  $b = 3$

52)  $a = 4.4$ ,  $c = 10$

53)  $b = 6$ ,  $c = 10$

54)  $a = 0.6$ ,  $m\angle B = 73^\circ$

55)  $m\angle A = 69^\circ$ ,  $a = 18.2$

56)  $m\angle B = 26^\circ$ ,  $a = 6.9$

57)  $a = 12$ ,  $b = 15$

58)  $m\angle B = 46^\circ$ ,  $b = 5.2$

Solve each equation for  $0 \leq \theta \leq 180$ . Exact answers.

59)  $\tan \theta = \sqrt{3}$

60)  $\frac{8 + \sqrt{2}}{2} = 4 + \sin \theta$

61)  $-6 = -5 + \cos \theta$

62)  $1 + \tan \theta = \frac{3 + \sqrt{3}}{3}$

63)  $6 \tan \theta = 2\sqrt{3}$

64)  $4 = 4 \tan \theta$

65)  $-\frac{1}{5} \cdot \sin \theta = 0$

66)  $2 + \cos \theta = \frac{3}{2}$

67)  $-4 + \cos \theta = \frac{-8 + \sqrt{3}}{2}$

68)  $-\frac{\sqrt{3}}{4} = -\frac{1}{2} \cdot \cos \theta$

69)  $-\frac{\sqrt{3}}{2} = -\cos \theta$

70)  $2 + \cos \theta = \frac{5}{2}$

71)  $3 = 2 + \cos \theta$

72)  $0 = -1 + \sin \theta$

73)  $2 = 2 + \tan \theta$

74)  $-2 \sin \theta = 0$

## Answers to Week 1 Practice-Ref. Ch. 1-2, 1-3 (ID: 1)

- |   |                          |  |                    |
|---|--------------------------|--|--------------------|
| 1) $\frac{4}{3}$  | 2) $\frac{12}{13}$       | 3) $\frac{\sqrt{11}}{5}$   | 4) $\frac{1}{2}$   |
| 5) $\frac{8}{15}$   | 6) $\frac{5\sqrt{5}}{2}$ | 7) $\frac{3}{5}$   | 8) $\frac{5}{4}$   |
| 9) $\frac{19}{6}$   | 10) $\frac{17}{15}$      | 11) $\frac{\sqrt{5}}{2}$   | 12) $\frac{15}{8}$ |
| 13) $\frac{7}{25}$  | 14) $\frac{23}{22}$      | 15) $\frac{25}{24}$  | 16) $\frac{12}{5}$ |
| 17) $\frac{24}{7}$  | 18) $\frac{4}{5}$        | 19) $\frac{4}{5}$  | 20) $\frac{7}{3}$  |
| 21) $\frac{1}{3}$   | 22) $\frac{17}{15}$      | 23) $\frac{25}{24}$  | 24) $\frac{7}{24}$ |
| 25) 2   | 26) $\frac{\sqrt{7}}{4}$ | 27) 1  | 28) $\frac{4}{3}$  |
| 29) $\frac{12}{13}$   | 30) $\frac{\sqrt{5}}{2}$ | 31) $\frac{4\sqrt{15}}{19}$  | 32) $\frac{5}{4}$  |
| 33) $72^\circ$  | 34) $59^\circ$           | 35) $43^\circ$   | 36) $85^\circ$     |
| 37) $83^\circ$  | 38) $62^\circ$           | 39) $m\angle B = 29.6^\circ$ , $b = 6.4$ , $a = 11.3$                |                    |
| 40) $m\angle B = 43^\circ$ , $b = 3.8$ , $a = 4$                  |                          | 41) $m\angle A = 63.7^\circ$ , $b = 6$ , $c = 13.5$                  |                    |
| 42) $m\angle A = 75^\circ$ , $a = 11.2$ , $c = 11.6$              |                          | 43) $m\angle B = 23^\circ$ , $b = 5.9$ , $c = 15.2$                  |                    |
| 44) $m\angle A = 41.9^\circ$ , $b = 7.4$ , $a = 6.7$              |                          | 45) $m\angle A = 21.9^\circ$ , $b = 10.2$ , $a = 4.1$                |                    |
| 46) $m\angle A = 45^\circ$ , $b = 15$ , $c = 21.2$                |                          | 47) $m\angle A = 62^\circ$ , $a = 4$ , $c = 4.5$                     |                    |
| 48) $m\angle A = 50^\circ$ , $b = 2.5$ , $c = 3.9$                |                          | 49) $m\angle B = 45^\circ$ , $m\angle A = 45^\circ$ , $c = 5.7$      |                    |
| 50) $m\angle B = 66^\circ$ , $b = 18$ , $c = 19.7$                |                          | 51) $m\angle A = 74.7^\circ$ , $m\angle B = 15.3^\circ$ , $c = 11.4$ |                    |
| 52) $m\angle B = 63.9^\circ$ , $m\angle A = 26.1^\circ$ , $b = 9$ |                          | 53) $m\angle B = 36.9^\circ$ , $m\angle A = 53.1^\circ$ , $a = 8$    |                    |
| 54) $m\angle A = 17^\circ$ , $b = 2$ , $c = 2.1$                  |                          | 55) $m\angle B = 21^\circ$ , $b = 7$ , $c = 19.5$                    |                    |
| 56) $m\angle A = 64^\circ$ , $b = 3.4$ , $c = 7.7$                |                          | 57) $m\angle B = 51.3^\circ$ , $m\angle A = 38.7^\circ$ , $c = 19.2$ |                    |
| 58) $m\angle A = 44^\circ$ , $a = 5$ , $c = 7.2$                  |                          | 59) $\{60\}$   |                    |
| 60) $\{45, 135\}$   |                          | 61) $\{180\}$  |                    |
| 62) $\{30\}$  |                          | 63) $\{30\}$   |                    |
| 63) $\{30\}$  |                          | 64) $\{45\}$   |                    |
| 64) $\{45\}$  |                          | 65) $\{0, 180\}$   |                    |
| 65) $\{0, 180\}$  |                          | 66) $\{120\}$  |                    |
| 66) $\{120\}$   |                          | 67) $\{30\}$   |                    |
| 67) $\{30\}$  |                          | 68) $\{30\}$   |                    |
| 68) $\{30\}$  |                          | 69) $\{30\}$   |                    |
| 69) $\{30\}$  |                          | 70) $\{60\}$   |                    |
| 70) $\{60\}$  |                          | 71) $\{0\}$  |                    |
| 71) $\{0\}$   |                          | 72) $\{90\}$   |                    |
| 72) $\{90\}$  |                          | 73) $\{0, 180\}$   |                    |
| 73) $\{0, 180\}$  |                          | 74) $\{0, 180\}$   |                    |