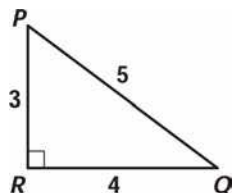


Lesson 2 Worksheet 2

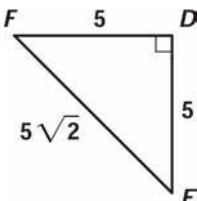
Trigonometric Ratios

Part I: Find the value of the sine, cosine, and tangent ratios for each triangle below. Be sure to show your work and give both a fraction and a decimal answer for each one. Simplify fractions and radicals and round decimals to 2 places.



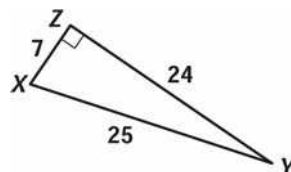
Fraction

Decimal



Fraction

Decimal



Fraction

Decimal

- | | | | | | |
|---------------------|-------|----------------------|-------|----------------------|-------|
| 1. $\sin P =$ _____ | _____ | 7. $\sin F =$ _____ | _____ | 13. $\sin X =$ _____ | _____ |
| 2. $\cos P =$ _____ | _____ | 8. $\cos F =$ _____ | _____ | 14. $\cos X =$ _____ | _____ |
| 3. $\tan P =$ _____ | _____ | 9. $\tan F =$ _____ | _____ | 15. $\tan X =$ _____ | _____ |
| 4. $\sin Q =$ _____ | _____ | 10. $\sin D =$ _____ | _____ | 16. $\sin Y =$ _____ | _____ |
| 5. $\cos Q =$ _____ | _____ | 11. $\cos D =$ _____ | _____ | 17. $\cos Y =$ _____ | _____ |
| 6. $\tan Q =$ _____ | _____ | 12. $\tan D =$ _____ | _____ | 18. $\tan Y =$ _____ | _____ |

Part II: Find the following ratios (decimal answers rounded to 2 decimal places) ratio for each of the following using a calculator. Make sure that the calculator is set to degree mode.

- | | | |
|-----------------------------|-----------------------------|-----------------------------|
| 19. $\sin 10^\circ =$ _____ | 27. $\cos 10^\circ =$ _____ | 35. $\tan 10^\circ =$ _____ |
| 20. $\sin 20^\circ =$ _____ | 28. $\cos 20^\circ =$ _____ | 36. $\tan 20^\circ =$ _____ |
| 21. $\sin 30^\circ =$ _____ | 29. $\cos 30^\circ =$ _____ | 37. $\tan 30^\circ =$ _____ |
| 22. $\sin 40^\circ =$ _____ | 30. $\cos 40^\circ =$ _____ | 38. $\tan 40^\circ =$ _____ |
| 23. $\sin 50^\circ =$ _____ | 31. $\cos 50^\circ =$ _____ | 39. $\tan 50^\circ =$ _____ |
| 24. $\sin 60^\circ =$ _____ | 32. $\cos 60^\circ =$ _____ | 40. $\tan 60^\circ =$ _____ |
| 25. $\sin 70^\circ =$ _____ | 33. $\cos 70^\circ =$ _____ | 41. $\tan 70^\circ =$ _____ |
| 26. $\sin 80^\circ =$ _____ | 34. $\cos 80^\circ =$ _____ | 42. $\tan 80^\circ =$ _____ |

43. **Think about it!** Why are sine and cosine ratios always less than 1, but tangents are not?