

# Degrees and radians essay



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Degrees and radian have many similarities between them and they have many contrasting features also. The most common similarity is that both are used for measurement of angles. The value of degree can be converted to radians and vice versa. However, both have many contrasting features also. While degrees are used at elementary level of mathematics, radians are used at advanced level, mainly in the integral and derivative calculus. The main contrasting feature lies in the fact that radian is based on a constant known as pi, whereas, degree is not.

The reason for degree not being reliant on the concept of pi, lies in its genesis. The credit of inventing degrees as a mean to measure angles goes to Babylonians, who followed the sexagesimal number system, which was based on number 60. (weisstein Eric w. ) Perhaps, this concept came into existence because the Babylonian year consisted of 360 days. The divisions of a degree into arc minutes and arc seconds is also in multiples of 60. (weisstein Eric w. ) Hence the number 60 plays a very important role in the degree, and pi has no role to play in this system. system.

Whereas the concept of radian was floated as late as 1714, by Roger Coates. (history) The world of mathematics and calculations had undergone significant advances. The very concept of a radian is dependent on arc length, ( Page John) which is once again dependent on pi. Conclusively it can be said that the reason for degrees not dependent on pi and radians being heavily dependent on pi, lies in the age during which they were invented and also the system which formed the base of their invention. Both have the same function but their applications are quite different.