

# Mathematics

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## (Chapter 2)(Inverse Trigonometric Functions)

(Class XII)

### (Exemplar Problems)

#### Objective Type Questions

Fill in the blank in the following:

#### Question 47:

The result  $\tan^{-1}x - \tan^{-1}y = \tan^{-1} \frac{x-y}{1+xy}$  is true when value of  $xy$  is \_\_\_\_\_.

#### Answer 47:

We know that:

The result  $\tan^{-1}x - \tan^{-1}y = \tan^{-1} \frac{x-y}{1+xy}$  is true

If  $xy > -1$

#### Note:

The result  $\tan^{-1}x + \tan^{-1}y = \tan^{-1} \frac{x+y}{1-xy}$  is true

If  $xy < 1$

