

**Calculus Worksheet: Domain and Range Of Inverse Trigonometric Functions(1)**

**Review:**

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|-----------------------|-----------------------------|--|
| 1. $y = \sin^{-1}(x)$ | domain: $[-1, 1]$           | range: $[-\frac{\pi}{2}, \frac{\pi}{2}]$ |
| 2. $y = \cos^{-1}(x)$ | domain: $[-1, 1]$           | range: $[0, \pi]$                        |
| 3. $y = \tan^{-1}(x)$ | domain: $(-\infty, \infty)$ | range: $(-\frac{\pi}{2}, \frac{\pi}{2})$ |
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**Questions**

1. Find the domain of the following functions

a)  $f(x) = 2 \sin^{-1}(2x - 1)$

b)  $g(x) = 3 \tan^{-1}(x)$

c)  $h(x) = \pi - 2 \cos^{-1}(-x + 1)$

d)  $i(x) = \sin(\tan^{-1}(x))$

e)  $j(x) = \cos(\sin^{-1}(x))$

f)  $k(x) = \tan(\cos^{-1}(x))$