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1) Which of the following is an odd function

- X
- a) $\csc(2x)$
 - b) $|x|$
 - c) $\cos x$

2) The range of the function $\frac{1-\cos x}{2}$ is

- ✓
- a) $[-1,1]$
 - b) $[0,1]$
 - c) $[0,2]$

3) $\lim_{x \rightarrow \infty} \frac{\sin(x^2)}{x}$

- ✓
- a) ∞
 - b) 1
 - c) 0

4) The function $f(x) = \frac{x^2-x}{x^2+x}$ has

- ✓
- a) vertical asymptote at $x = 0$
 - b) removable discontinuity at $x = 0$
 - c) none of the above

5) The function $f(x) = x^4 + 2x^3 - 5x - 3$ has a root in the interval

- ✓
- a) $(-1,0)$
 - b) $(0,1)$
 - c) f has no roots

$$f(-1) = 1$$

$$f(0) = -3$$

$$1x - 3 = \boxed{-3}$$

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