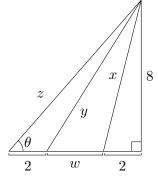
1. [9 points] Use the following diagram to answer the questions for this problem. Give your answers in **exact** form in terms of sin, cos, tan, and  $\theta$ . Do not assume  $\theta$  is a specific value.



**a**. [2 points] Find the length of x.

<b>b</b> . [2 points]	Find the length of $z$ .	<i>x</i> =
<b>c</b> . [3 points]	Find the length of $w$ .	<i>z</i> =
<b>d</b> . [2 points]	Find the length of $y$ in terms of $w$ .	<i>w</i> =
		<i>y</i> =

**2**. [6 points] Determine whether the following functions are even, odd, or neither even nor odd. Circle your answer. You do no need to show any work for this problem.

**a**. [2 points] The function  $x^2 + x + 1$  is

EVENODDNEITHER**b.** [2 points]The function  $\frac{x^4+1}{x^3-x}$  isEVENODDNEITHER**c.** [2 points]The function  $3x \sin(x)$  isEVENODDNEITHER