Draw a picture. list your given information and unknowns for each problems 1) A test car moves at a constant speed ofm's around a circular track. If the distance from car to the center of the track ism, what is the centripetal acceleration of the car? Drawing Given Info Formula Set-Up with Units   2) Find the tangential acceleration of a person standingm from the center of a spinning amusement-park ride that has an angular acceleration ofrad/s <sup>2</sup> . Drawing Given Info Formula Set-Up with Units   3) Ankg bicyclist is riding at a linear speed ofm/s around a circular track v radius ofm. Find the magnitude of the force that maintains the bike's circular more rad/s <sup>2</sup> .   3) Ankg bicyclist is riding at a linear speed ofm/s around a circular track v radius ofm. Find the magnitude of the force that maintains the bike's circular more rad/s <sup>2</sup> .   4) Akg person standsm from akg person sitting on a bench nearby. What is the magnitude of the gravitational force between them?   Drawing Given Info Formula Set-Up with Units	Honors	Physics Chapt	ter 7 Part 2 St	udy Sheet	Name	#:
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Answer	1) A test of car to <b>Drawing</b>	car moves at a cons the center of the tra <b>Given Info</b>	tant speed of ck is Formula	m/s around m, what is the cent Set-Up wit	l a circular track. If the c tripetal acceleration of t h Units	listance from the he car?
Answer	2) <b>Find</b> t spinni <b>Drawing</b>	<b>the tangential ac</b> ing amusement-pa <b>Given Info</b>	<b>celeration</b> of a peark ride that has a <b>Formula</b>	rson standing in angular acceler <b>Set-Up wit</b> l	Answer m from the ation of rad h Units	center of a <b>/s²</b> .
Answer	3) An radius <b>Drawing</b>	<b>kg</b> bicyclist s of <b>m</b> . I Given Info	is riding at a linea F <b>ind the magnitu</b> Formula	ar speed of Ide of the force th Set-Up with	<b>Answer</b> <b>m/s</b> around a circ hat maintains the bike <b>h Units</b>	ular track with a 's circular motion.
<ul> <li>5) A coin with a diameter of cm is dropped onto a horizontal surface. The coin starts out with initial angular speed of rad/s and rolls in a straight line without slipping. If the rotation</li> </ul>	4) A nearby Drawing	<b>kg</b> person st y. <b>What is the m</b> Given Info	ands agnitude of the g Formula	m from a ravitational force Set-Up with	<b>Answer</b> <b>kg</b> person sitting of <b>e</b> between them? <b>h Units</b>	on a bench
with an angular acceleration of magnitude rad/s <sup>2</sup> , how far does the coin roll before comin rest?	5) A coin initial with an <b>rest</b> ?	with a diameter of angular speed of n angular acceleratio	<b> cm</b> is dr <b>rad/s</b> ar on of magnitude	opped onto a horizo: id rolls in a straight <b>rad/s², how</b>	<b>Answer</b> ntal surface. The coin sta line without slipping. If <b>a far does the coin roll b</b>	arts out with an the rotation slows <b>efore coming to</b>

Answer \_\_\_\_\_

	<u>revolutions</u>	in	min before reaching a final angular speed. What is the
angular speed of the mass after _			min?
Drawing	Given Info	Formula	Set-Up with Units
			Answer
part is Drawing	cm. Suppose m/s. What is Given Info	an egg of this s s the magnitud Formula	size rolls down a slope so that the tangential speed of its widest e of the centripetal acceleration acting at those points? Set-Up with Units
			Answer
8) Mata Jagd Jagdamba the hair bi <b>Drawing</b>	amba of India had conducts experir <b>g</b> . She then a reaks when the <b>ta</b> <b>Given Info</b>	d the longest ha nents with her h attaches a <b>small</b> angential speed Formula	ir—in 1994, it was measured to be <b>m long</b> . Suppose hair. First, she determines that one hair can support a mass of ler mass to the same hair and swings it in the horizontal plane. If l of the mass reaches m/s, how large is the mass? Set-Up with Units

				Answer		
9) Deimos, a	satellite of Mars, h	as an <b>average</b>	radius of	<b>km</b> and	a mass of	kg.
Calculate	the gravitational	force applied	to a rock with a ma	ss of	kg that lies on the	surface of Deimos.
Drawing	<b>Given Info</b>	Formula	Set-Up	with U	nits	

Answer \_\_\_\_\_