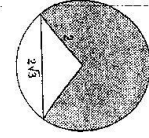
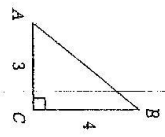


April 2008 Math Extra Credit

<p>1)</p> <p>In a circle of radius 2, two radii are drawn from the center to the endpoints of a chord of length $2\sqrt{3}$. Find the shaded area.</p> 	<p>2)</p> <p>Bill starts a project at 1:00 p.m. and finishes it 800 minutes later. At what time does he finish?</p>	<p>3)</p> <p>Let $\lfloor x \rfloor$ denote the greatest integer less than or equal to x. Find the value of</p> $\left\lfloor \frac{2}{5} \right\rfloor + \left\lfloor \frac{4}{5} \right\rfloor + \left\lfloor \frac{6}{5} \right\rfloor + \dots + \left\lfloor \frac{48}{5} \right\rfloor$
<p>4)</p> <p>Given right triangle ABC, let D be the midpoint of AC. What is the ratio of the perimeter of triangle ABD to the perimeter of triangle ABC? (Make an estimate before calculating formally.)</p> 	<p>5)</p> <p>The front wheels of a wagon measure 3.5 feet in diameter. The rear wheels measure 4.25 feet in diameter. When the wagon is stopped, a chalk mark is made on both a front and a rear wheel. How far must the wagon travel before both chalk marks return to their initial position at the same time?</p>	