

**JHMT 2013 Geometry Test  
SOLUTIONS**

**Problem 1.**  $\sqrt{51}$

**Problem 2.**  $\frac{\pi}{3} + 1 - \sqrt{3}$

**Problem 3.**  $\frac{6}{\sqrt{7}}$

**Problem 4.**  $\frac{14}{5}$

**Problem 5.**  $\frac{\sqrt{3}}{4}$

**Problem 6.**  $\frac{3-\sqrt{5}}{2}$

**Problem 7.** 68

**Problem 8.**  $\frac{18-8\sqrt{3}}{27}\pi$

**Problem 9.**  $\sqrt{46}$

**Problem 10.**  $\frac{\sqrt{35}}{72}$