A Test that is Totally Hip and Rad!

Review

KU /26

Name :_____

Part1 : Evaluate each of the following: [ku 6]

(a) $\sqrt{16}-\sqrt{49}$ **(b)** $2\sqrt{25}-3\sqrt{36}$ **(c)** $\sqrt{\frac{9}{4}}-\sqrt{\frac{25}{16}}$

Part 2: Express as a mixed radial in lowest form: [ku 4]

(a) $\sqrt{48}$ **(b)** $\sqrt{300}$ **(c)** $7\sqrt{80}$ **(d)** $-3\sqrt{72}$

Part 3: Simplify each of the following: [ku 16]

(a) $2\sqrt{8}\times\sqrt{2}$ **(b)** $4\sqrt{8}\times 3\sqrt{6}\times 7\sqrt{3}$ **(c)** $-3\sqrt{98}-5\sqrt{32}+\sqrt{8}$

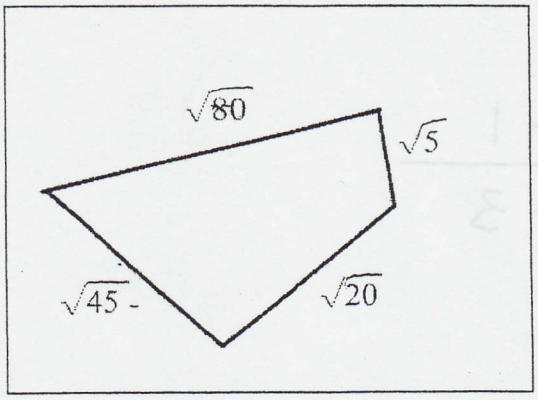
(d) $5\sqrt{3}+4\sqrt{18}-14\sqrt{12}-\sqrt{72}$ **(e)** $\sqrt{2}\left(2\sqrt{10}-5\sqrt{6}\right)$

(f) $\left(1-\sqrt{2}\right)\left(3\sqrt{3}-5\sqrt{8}\right)$ **(g)** $\left(4-6\sqrt{5}\right)^2$

Part 4: Application [app 8]

1) A rectangular prism has a length of $\sqrt{3}-1$, a width of $4-\sqrt{3}$ and a height of $\sqrt{3}+2$. Determine the volume of the rectangular prism in exact radical form.

2) Express the perimeter of the quadrilateral in simplest radical form:



Part 5

Simplify by "Rationalizing the Denominator": when necessary: [App 10]

(a) $\dfrac{\sqrt{30}}{\sqrt{5}}$

(b) $\dfrac{4}{\sqrt{6}}$

(c) $\dfrac{\sqrt{2}}{4\sqrt{10}}$

(d) $\dfrac{\sqrt{5}}{3-\sqrt{2}}$

(e) $\dfrac{2}{\sqrt{5}-\sqrt{3}}$

(f) $\dfrac{\sqrt{3}+1}{2\sqrt{2}-3}$