1. Simplify.

a) $\sqrt{5} \cdot \sqrt{6}$ $= \sqrt{30}$

b) $\sqrt{64}$ $= 8$

c) $6\sqrt{40}$ $= 6\sqrt{4 \cdot 10} = 12\sqrt{10}$

d) $\sqrt{50} \cdot \sqrt{72}$ $= \sqrt{25 \cdot 2} \cdot \sqrt{36 \cdot 2} = 5\sqrt{2} \cdot 6\sqrt{2} = 30\sqrt{4} = 30 \cdot 2 = 60$

e) $\frac{\sqrt{200}}{\sqrt{2}}$ $= \sqrt{\frac{200}{2}} = \sqrt{100} = 10$

f) $\sqrt{\frac{14}{72}}$ $= \sqrt{\frac{7}{36}} = \frac{\sqrt{7}}{\sqrt{36}} = \frac{\sqrt{7}}{6}$

g) $\sqrt{50x^{20}}$ $= \sqrt{25 \cdot 2 \cdot x^{20}} = 5x^{10}\sqrt{2}$

h) $\sqrt[3]{192}$ $= \sqrt[3]{8 \cdot 24} = 2\sqrt[3]{24} = 2\sqrt[3]{4 \cdot 6} = 4\sqrt[3]{6}$

i) $\sqrt[4]{243}$ $= \sqrt[4]{81 \cdot 3} = 3\sqrt[4]{3}$

j) $\sqrt[3]{125x^{15}}$ $= 5x^{5}$ ($15 \div 3$; $\sqrt[3]{125}$)

k) $\sqrt[3]{24x^4}$ $= \sqrt[3]{8 \cdot 3 \cdot x^3 \cdot x} = 2x\sqrt[3]{3x}$

Q: April says May is a liar. May says June is a liar. June says April and May are both liars. If only one person is telling the truth, who is it?