Name KEY/Oscar's work

Algebra 1
9.1: Simplifying Radical WS

Simplify each expression. Leave answer in simplest radical form. Show all work!!

1) $\sqrt{54}$ $3\sqrt{6}$	**2)** $\sqrt{72}$ $6\sqrt{2}$	**3)** $\sqrt{9x^2y}$ $3x\sqrt{y}$	**4)** $-\sqrt{44a^6}$ $-2a^3\sqrt{11}$
5) $\sqrt{4d^2}$ $2d$	**6)** $\sqrt{x^4}$ x^2	**7)** $x\sqrt{24x^8}$ $2x^5\sqrt{6}$	**8)** $3\sqrt{48d}$ $12\sqrt{3d}$
9) $7\sqrt{72b^3}$ $42b\sqrt{2b}$	**10)** $\sqrt{18}$ $3\sqrt{2}$	**11)** $2\sqrt{40}$ $4\sqrt{10}$	**12)** $3\sqrt{7}\bullet 2\sqrt{5}$ $6\sqrt{35}$
13) $4\sqrt{10}\cdot 3\sqrt{2}$ $24\sqrt{5}$	**14)** $\sqrt{48x^9y^4z}$ $4x^4y^2\sqrt{3xz}$	**15)** $5\sqrt{20a^4b^{13}}$ $10a^2b^6\sqrt{5b}$	**16)** $3\sqrt{2}-\sqrt{6}+10\sqrt{2}$ $13\sqrt{2}-\sqrt{6}$
17) $4\sqrt{7}-6\sqrt{63}$ $\sqrt{7}$	**18)** $(2\sqrt{5}-4)^2$ $36-16\sqrt{5}$	**19)** $3(4+\sqrt{5})$ $12+3\sqrt{5}$	**20)** $\sqrt{2}(\sqrt{7}-\sqrt{5})$ $\sqrt{14}-\sqrt{10}$

21) $\sqrt{\frac{4}{81}}$ $\frac{2}{9}$	**22)** $\sqrt{\frac{5}{36}}$ $\frac{\sqrt{5}}{6}$	**23)** $\sqrt{\frac{b^3}{64}}$ $\frac{b\sqrt{b}}{8}$	**24)** $\sqrt{\frac{121x^2}{9}}$ $\frac{11x}{3}$
25) $\frac{2}{\sqrt{3}}$ $\frac{2\sqrt{3}}{3}$	**26)** $\frac{1}{\sqrt{5}}$ $\frac{\sqrt{5}}{5}$	**27)** $\frac{\sqrt{5}}{\sqrt{3}}$ $\frac{\sqrt{15}}{3}$	**28)** $\frac{\sqrt{2}}{\sqrt{5}}$ $\frac{\sqrt{10}}{5}$
29) $\sqrt{\frac{5}{24}}$ $\frac{\sqrt{30}}{12}$	**30)** $\sqrt{\frac{4}{52}}$ $\frac{2\sqrt{13}}{26}$	**31)** $\sqrt{\frac{2x^2}{7}}$ $\frac{x\sqrt{14}}{7}$	**32)** $\frac{6}{\sqrt{8}}$ $\frac{3\sqrt{2}}{2}$
33) $\frac{1}{\sqrt{6}-1}$ $\frac{\sqrt{6}+1}{5}$	**34)** $\frac{3}{4+\sqrt{2}}$ $\frac{12-3\sqrt{2}}{14}$	**35)** $\frac{\sqrt{3}}{5-\sqrt{2}}$ $\frac{5\sqrt{3}+\sqrt{6}}{23}$	