RADICALS

1. Evaluate the following

(a) $\sqrt{3} \times \sqrt{7}$

$\sqrt{\ }$ ....

(b) $\sqrt{24} \div \sqrt{6}$

$= \sqrt{\ }$

$=$ ....

(c) $2\sqrt{3} \times 3\sqrt{5}$

$\sqrt{\ }$ ....

(d) $10\sqrt{8} \div 2\sqrt{2}$ $= \sqrt{\ }$

$= \quad \times$

$=$ ....

2. Simplify $(\sqrt{3})^2$ $\sqrt{\ } \times \sqrt{\ } = \sqrt{\ }$

$=$ ....

3. Work out the exact value of $(\sqrt{2})^4$

$\sqrt{\ } \times \sqrt{\ } \times \sqrt{\ } \times \sqrt{\ }$

....

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4. (a) Express $\sqrt{75}$ in its simplest form.

$\sqrt{\quad \times \quad} = \sqrt{\ } = \sqrt{\ }$ ....

(b) Express $\sqrt{32}$ in its simplest form.

$\sqrt{\quad \times \quad} = \sqrt{\ } = \sqrt{\ }$ ....

(c) Express $\sqrt{8}$ in its simplest form.

$\sqrt{\quad \times \quad} = \sqrt{\ } = \sqrt{\ }$ ....

(d) Express $\sqrt{200}$ in its simplest form.

$\sqrt{\quad \times \quad} = \sqrt{\ } = \sqrt{\ }$ ....

5. Simplify fully

$\sqrt{} + \sqrt{}$

(a) $\sqrt{50} + \sqrt{32}$

$\sqrt{50} = \sqrt{ \times } = \sqrt{}$

$\sqrt{32} = \sqrt{ \times } = \sqrt{}$

.........................$\sqrt{}$

(b) $\sqrt{80} + \sqrt{20}$

$\sqrt{80} = \sqrt{} \times \sqrt{} = \sqrt{}$

$\sqrt{20} = \sqrt{} \times \sqrt{} = \sqrt{}$

$\sqrt{} + \sqrt{} = \sqrt{}$ ....$\sqrt{}$

(c) $\sqrt{200} - \sqrt{72}$

$\sqrt{200} = \sqrt{} \times \sqrt{} = \sqrt{}$

$\sqrt{72} = \sqrt{} \times \sqrt{} = \sqrt{}$

$\sqrt{} - \sqrt{} \longrightarrow$ ....$\sqrt{}$

(d) $3\sqrt{12} + \sqrt{75}$

$3\sqrt{12} = 3\left(\sqrt{} \times \sqrt{}\right) = 3\left(\times \sqrt{}\right) = \sqrt{}$

$\sqrt{75} = \sqrt{} \times \sqrt{} = \sqrt{}$

$\sqrt{} + \sqrt{} \longrightarrow$ ....$\sqrt{}$