

Name:

Class/Set:

Surds

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1: Simplify the following surds:

a) $\sqrt{96}$

b) $\sqrt{27}$

c) $\sqrt{75}$

2: Simplify the following surds:

a) $\sqrt{50} + \sqrt{8}$

b) $\sqrt{90} + \sqrt{250}$

c) $\sqrt{80} + \sqrt{5}$

3: Simplify the following surds:

a) $\sqrt{175} - \sqrt{28}$

b) $\sqrt{175} - \sqrt{28}$

c) $\sqrt{250} - \sqrt{160}$

4: Simplify the following surds:

a) $\sqrt{2} \times \sqrt{14}$

b) $\sqrt{160} \times \sqrt{10}$

c) $\sqrt{5} \times \sqrt{35}$

5: Simplify the following surds:

a) $\sqrt{10} \div \sqrt{2}$

b) $\sqrt{50} \div \sqrt{10}$

c) $\sqrt{150} \div \sqrt{24}$

6: Simplify the following surds:

a) $\frac{6}{\sqrt{3}}$

b) $\frac{2}{\sqrt{7}}$

c) $\frac{10}{\sqrt{10}}$

7: Simplify the following surds:

a) $(2 + \sqrt{10})^2$

b) $(3 + \sqrt{6})^2$

c) $(4 - \sqrt{5})^2$

Answers: Surds

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1: a) $4\sqrt{6}$

b) $3\sqrt{3}$

c) $5\sqrt{3}$

2: a) $7\sqrt{2}$

b) $8\sqrt{10}$

c) $5\sqrt{5}$

3: a) $3\sqrt{7}$

b) $3\sqrt{7}$

c) $\sqrt{10}$

4: a) $2\sqrt{7}$

b) 40

c) $5\sqrt{7}$

5: a) $\sqrt{5}$

b) $\sqrt{5}$

c) $\frac{5}{2}$

6: a) $2\sqrt{3}$

b) $\frac{2\sqrt{7}}{7}$

c) $\sqrt{10}$

7: a) $14 + 4\sqrt{10}$

b) $15 + 6\sqrt{6}$

c) $21 - 8\sqrt{5}$