

Name: _____

Class/Set: _____

Zero, Negative and Fractional Indices 1

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1: Work out the following:

a) $3^{-1} =$ _____

b) $8^0 =$ _____

c) $5^0 =$ _____

d) $5^{-2} =$ _____

e) $7^{-2} =$ _____

f) $9^0 =$ _____

2: Work out the following:

a) $16^{1/2} =$ _____

b) $100^{1/2} =$ _____

c) $216^{1/3} =$ _____

d) $8000^{1/3} =$ _____

e) $4^{1/2} =$ _____

f) $125^{1/3} =$ _____

3: Work out the following:

a) $8^{-1/3} =$ _____

b) $1000^{-1/3} =$ _____

c) $64^{-1/3} =$ _____

d) $25^{-1/2} =$ _____

e) $343^{-1/3} =$ _____

f) $512^{-1/3} =$ _____

4: Work out the following:

a) $8^{5/3} =$ _____

b) $4^{5/2} =$ _____

c) $100^{3/2} =$ _____

d) $8^{2/3} =$ _____

e) $32^{3/5} =$ _____

f) $81^{3/4} =$ _____

5: Work out the following:

a) $64^{-2/3} =$ _____

b) $8^{-4/3} =$ _____

c) $32^{-4/5} =$ _____

d) $32^{-2/5} =$ _____

e) $125^{-2/3} =$ _____

f) $1000^{-2/3} =$ _____

Answers: Zero, Negative and Fractional Indices 1

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1: a) $\frac{1}{3}$ b) 1 c) 1 d) $\frac{1}{25}$ e) $\frac{1}{49}$ f) 1

2: a) 4 b) 10 c) 6 d) 20 e) 2 f) 5

3: a) $\frac{1}{2}$ b) $\frac{1}{10}$ c) $\frac{1}{4}$ d) $\frac{1}{5}$ e) $\frac{1}{7}$ f) $\frac{1}{8}$

4: a) 32 b) 32 c) 1000 d) 4 e) 8 f) 27

5: a) $\frac{1}{16}$ b) $\frac{1}{16}$ c) $\frac{1}{16}$ d) $\frac{1}{4}$ e) $\frac{1}{25}$ f) $\frac{1}{100}$