(10)

(1)

(2)

(10)

(3)

(7)

(11)

UNIT 1 Indices

Mental Tests

Test 1.1 2^3 1.

 3^2

 4^{3}

 3^3

 8^2

 4^2

 9^2

5. 7^2

(9)

(64)

(49)

(27)

(64)

(16)

3.

5.

6.

7.

8. 1^{3}

Test 1.3 1.
$$\sqrt{16}$$

3.

4.

6.

7.

8.

1.
$$1^2$$
2. 2^2

 5^3

 4^2

 9^{2}

 10^{2}

 7^{2}

 8^2

Test 1.6

2. $16^{-\frac{1}{4}}$

3. $1^{-\frac{1}{2}}$

(125)

(16)

(81)

(100)

(49)

(1)

(64)

2.
$$\sqrt[3]{8}$$
 (2)

(4)

3.
$$\sqrt{100}$$
 (10)

4.
$$\sqrt[3]{27}$$
 (3)

5.
$$\sqrt{49}$$
 (7)

6.
$$\sqrt{64}$$
 (8)

7.
$$\sqrt{25}$$
 (5)

8.
$$\sqrt[3]{64}$$
 (4)

9.
$$\sqrt{81}$$
 (9)

9.
$$\sqrt{81}$$
 (9

8.
$$\sqrt[3]{64}$$
 (4)

.
$$\sqrt{81}$$
 (9)

6.
$$\sqrt{49}$$
7. $\sqrt{121}$

Test 1.8

1. $\sqrt[3]{8} + \sqrt{49}$

2. $\sqrt[3]{1}$

3. $\sqrt{4}$

5. $\sqrt{9}$

4. $\sqrt[3]{1000}$

8.
$$\sqrt{25}$$
 (5)

9.
$$\sqrt{81}$$

9.
$$\sqrt[3]{125}$$
 (5)

10.
$$6^2$$

10.
$$10^3$$

(1000)

10. $\sqrt{36}$

Test 1.7

10.
$$\sqrt{144}$$
 (12)

Test 1.5

1.
$$16^{\frac{1}{4}}$$

1.
$$5^{-2}$$
 $\left(\frac{1}{25}\right)$

$$\left(\frac{1}{25}\right)$$

1.
$$\sqrt[3]{27} + \sqrt{64}$$
 (11)

2.
$$\sqrt{100} - \sqrt[3]{64}$$
 (6) 2. $\sqrt{36} \times \sqrt[3]{125}$ (30)

$$\sqrt{100} - \sqrt[3]{64}$$
 (6)

(1) 3.
$$125^{-\frac{1}{3}}$$
 $\left(\frac{1}{5}\right)$ 3. $\left(\frac{1}{4}\right)^{-3}$ (64)

(9)

4.
$$27^{\frac{2}{3}}$$
 (9)

3. $32^{\frac{4}{5}}$

 $\left(\frac{1}{4}\right)$

4.
$$\left(\frac{49}{36}\right)^{-\frac{1}{2}}$$

5.
$$8^{-\frac{1}{3}}$$

$$\left(\frac{1}{2}\right)$$

$$\left(\frac{1}{2}\right)$$
 5. $16^{-1.5}$ $\left(\frac{1}{64}\right)$ 5. $\left(\frac{3}{4}\right)^{-2}$

6.
$$27^{\frac{1}{3}}$$
 (3) 6. $9^{1.5}$

$$\left(\frac{16}{9}\right)$$
 5. $100^{\frac{1}{2}} \times \left(\frac{2}{5}\right)^{-1} (25)$

$$(27) 6. 16^{-1.25} \left(\frac{1}{32}\right)$$

 $\left(\frac{1}{2}\right)$

$$\left(\frac{1}{-}\right)$$

7.
$$64^{-\frac{2}{3}}$$
 $\left(\frac{1}{16}\right)$ 7. $1000^{-\frac{2}{3}}$ $\left(\frac{1}{100}\right)$ 7. $32^{\frac{2}{3}}$

7.
$$32^{\frac{2}{5}}$$

8.
$$\left(\frac{2}{7}\right)^{-2}$$
 $\left(\frac{49}{4}\right)^{-2}$

$$\left(\frac{1}{25}\right)$$

$$\left(\frac{1}{25}\right)$$
 8. $27^{\frac{1}{3}} \times 8^{\frac{1}{3}}$ (6) 8. $\left(\frac{5}{7}\right)^{-2}$

8.
$$\left(\frac{3}{7}\right)$$

9.
$$1000^{-\frac{1}{3}}$$
 $\left(\frac{1}{10}\right)$

9.
$$\left(\frac{2}{5}\right)^{-3}$$
 $\left(\frac{125}{8}\right)$ 9. $\left(\frac{169}{25}\right)^{\frac{1}{2}}$

10.
$$1000^{\frac{2}{3}}$$
 (10)

10.
$$\left(\frac{1}{9}\right)^{-\frac{1}{2}}$$

(100)
$$10. \left(\frac{1}{9}\right)^{-\frac{1}{2}}$$
 (3) $10. \left(\frac{144}{169}\right)^{-\frac{1}{2}} \left(\frac{13}{12}\right)$ $10. \left(\frac{50}{72}\right)^{-\frac{1}{2}}$

$$10. \left(\frac{50}{72}\right)^{-\frac{1}{2}} \qquad \left(\frac{6}{5}\right)$$