

תרגול פסיכומטרי חזקות ושורשים 7 – פתרונות



מפתח תשובות נכונות:

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|--------|--------|--------|--------|
| (2) .7 | (2) .5 | (1) .3 | (3) .1 |
| (2) .8 | (1) .6 | (3) .4 | (3) .2 |

.1 $x^4 = 3^3 \cdot \sqrt{x^2}$
x = ?

- | | | | |
|-------|-------|-------|-------|
| 2 (4) | 3 (3) | 4 (2) | 9 (1) |
|-------|-------|-------|-------|

$$x^4 = 3^3 \cdot x$$

$$x^3 = 3^3$$

$$x = 3$$

.2 $\frac{5}{\frac{2}{5}} = ?$

- | | | | |
|-----------------------------|---------------------|---------------------|-------|
| $\frac{1}{\sqrt[7]{5}}$ (4) | $\sqrt[5]{5^7}$ (3) | $\sqrt[5]{5^2}$ (2) | 5 (1) |
|-----------------------------|---------------------|---------------------|-------|

$$\frac{5}{\frac{2}{5}} = 5^{1 - \left(-\frac{2}{5}\right)} = 5^{1 + \frac{2}{5}} = 5^{\frac{7}{5}} = \sqrt[5]{5^7}$$

.3 $\sqrt{0.25} = ?$

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|-----------|-----------|----------|---------|
| 0.625 (4) | 0.005 (3) | 0.05 (2) | 0.5 (1) |
|-----------|-----------|----------|---------|

$$\sqrt{0.25} = \sqrt{\frac{1}{4}} = \frac{\sqrt{1}}{\sqrt{4}} = \frac{1}{2}$$

.4 $\sqrt[3]{a^2} \cdot \sqrt[6]{16a} \cdot \sqrt[6]{4a} = 12$
a = ?

- | | | | |
|--------|-------|-------|-------|
| 16 (4) | 6 (3) | 2 (2) | 1 (1) |
|--------|-------|-------|-------|

$$\sqrt[3]{a^2} \cdot \sqrt[6]{16a} \cdot \sqrt[6]{4a} = 12$$

$$\sqrt[6]{a^4} \cdot \sqrt[6]{16a} \cdot \sqrt[6]{4a} = 12$$

$$\sqrt[6]{a^4 \cdot 16a \cdot 4a} = 12$$

$$\sqrt[6]{64a^6} = 12$$

$$\sqrt[6]{64} \cdot \sqrt[6]{a^6} = 12$$

$$2 \cdot a = 12 \Rightarrow a = 6$$

