**Making the Connection**

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| --- | --- |
| If you know this…, | …what do you multiply it by to find this…? |
| $$\sqrt{\frac{5}{4}}$$ | $$\sqrt{5}$$ |
| $$\sqrt{0.99}$$ | $$\sqrt{11}$$ |
| $$\sqrt{1.08}$$ | $$\sqrt{3}$$ |
| $$\sqrt{1.75}$$ | $$\sqrt{7}$$ |
| $$\sqrt{\frac{24}{25}}$$ | $$\sqrt{6}$$ |
| $$\sqrt{1.16}$$ | $$\sqrt{29}$$ |
| $$\sqrt[3]{1.024}$$ | $$\sqrt[3]{2}$$ |

|  |  |
| --- | --- |
| What value of $x$ can you use here…  | …to find an approximation for this…? |
| $$\sqrt{9-6x}$$ | $$\sqrt{8.7}$$ |
| $$\sqrt{1+\frac{x}{25}}$$ | $$\sqrt{26}$$ |
| $$\sqrt{1+\frac{x}{25}}$$ | $$\sqrt{28}$$ |
| $$\sqrt[3]{8+3x}$$ | $$\sqrt[3]{9}$$ |
| $$\left(1-3x\right)^{1.5}$$ | $$\left(97\right)^{1.5}$$ |
| $$\sqrt{1+3x}$$ | $$\sqrt{7}$$ |
| $$\sqrt{4-x}$$ | $$\sqrt{35}$$ |



**Making the Connection - Answers**

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| If you know this…, | …what do you multiply it by to find this…? |
| $$\sqrt{\frac{5}{4}}$$ | $$\sqrt{5}=2\sqrt{\frac{5}{4}}$$ |
| $$\sqrt{0.99}$$ | $$\sqrt{11}=\frac{10}{3}\sqrt{0.99}$$ |
| $$\sqrt{1.08}$$ | $$\sqrt{3}=\frac{5}{3}\sqrt{1.08}$$ |
| $$\sqrt{1.75}$$ | $$\sqrt{7}=3\sqrt{1.75}$$ |
| $$\sqrt{\frac{24}{25}}$$ | $$\sqrt{6}=\frac{5}{2}\sqrt{\frac{24}{25}}$$ |
| $$\sqrt{1.16}$$ | $$\sqrt{29}=5\sqrt{1.16}$$ |
| $$\sqrt[3]{1.024}$$ | $$\sqrt[3]{2}=\frac{5}{4}\sqrt[3]{1.024}$$ |

|  |  |
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| What value of $x$ can you use here…  | …to find an approximation for this…? |
| $$\sqrt{9-6x}$$ | $\sqrt{8.7}$, $x=0.05$ |
| $$\sqrt{1+\frac{x}{25}}$$ | $\sqrt{26}$, $x=1$ |
| $$\sqrt{1+\frac{x}{25}}$$ | $\sqrt{28}$, $x=3$ |
| $$\sqrt[3]{8+3x}$$ | $\sqrt[3]{9}$, $x=\frac{1}{3}$ |
| $$\left(1-3x\right)^{1.5}$$ | $\left(97\right)^{1.5}$, $x=0.01$ |
| $$\sqrt{1+3x}$$ | $\sqrt{7}$, $x=0.25$ |
| $$\sqrt{4-x}$$ | $\sqrt{35}$, $x=\frac{1}{9}$ |