Estimate the following values. No calculators allowed!

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| 1. $\sqrt{40}$
 | 1. $\sqrt{113}$
 | 1. $\sqrt[3]{21}$
 | 1. $\sqrt{85}$
 |

**Use the factor tiles to simplify the radicals.**

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| 1. $\sqrt{x^{4}y^{2}}$
 | 1. $\sqrt{12x^{5}w^{2}}$
 | 1. $\sqrt[3]{18x^{3}y^{7}}$
 |
| 1. $\sqrt[3]{16y^{6}w^{3}}$
 | 1. $\sqrt[4]{10x^{4}y^{6}}$
 |  |

1. What is $\left(\sqrt{5xy^{2}}\right)^{2}$? Explain why.