| Question |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pythagoras' theorem | $10^{2}=6^{2}+x^{2}$ | $13^{2}=8^{2}+x^{2}$ | $8^{2}=5^{2}+x^{2}$ | $13^{2}=9^{2}+x^{2}$ |  |  |
| Calculate | $100=36+x^{2}$ | $169=64+x^{2}$ | $64=25+x^{2}$ | $=x^{2}$ |  |  |
| Re-arrange | $x^{2}=100-36$ | $x^{2}=169-64$ | $x^{2}=64-25$ | $x^{2}=$ |  |  |
| Sum | $x^{2}=64$ | $x^{2}=105$ | $x^{2}=$ | $x^{2}=$ |  |  |
| Square root | $x=\sqrt{64}$ | $x=$ | $x=$ | $x=$ |  |  |
| Solve | $x=$ | $x=$ | $x=$ | $x=$ |  |  |

$\qquad$

## Using Pythagoras' theorem to find a shorter side

Shared on mathslinks.net

| Question |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pythagoras' theorem | $10^{2}=6^{2}+x^{2}$ | $13^{2}=8^{2}+x^{2}$ | $8^{2}=5^{2}+x^{2}$ | $13^{2}=9^{2}+x^{2}$ |  |  |
| Calculate | $100=36+x^{2}$ | $169=64+x^{2}$ | $64=25+x^{2}$ | $=x^{2}$ |  |  |
| Re-arrange | $x^{2}=100-36$ | $x^{2}=169-64$ | $x^{2}=64-25$ | $x^{2}=$ |  |  |
| Sum | $x^{2}=64$ | $x^{2}=105$ | $x^{2}=$ | $x^{2}=$ |  |  |
| Square root | $x=\sqrt{64}$ | $x=$ | $x=$ | $x=$ |  |  |
| Solve | $x=$ | $x=$ | $x=$ | $x=$ |  |  |

