## Fuel Sense Making

D"Percent Equation"- Dercent of a Number This is the basic when starting. When progressing to percentages that are not so nice, ie. $17 \%, 28 \%$, Stages of Expertise ${ }^{72 \%}$, it would make much more sense to use part = percent $x$ whole., especially if the whole
is not a "nice"number or you are looking for the whole or the part.
Consider a learning goal of a lesson you're using this week. What might each stage of expertise look like?

| Possible student thinking: I can figure |
| :---: |
| $100 \%, 50 \%$, and $25 \%$. |
| What is $20 \%$ of $\$ 50$ ? |
| Student response: I know it will be less |
| then $\$ 12.50$ because that is $25 \%$. |
| $50 \div 4$ is 12.50 . |
| Consciously |
| Incompetent |
| Unconsciously |
| Incompetent |
| Possible student thinking: |
| I have no idea, but ... |
| What is $20 \%$ of $\$ 50$ ? |
| Student response: $50 \%$ would be $\$ 25$ |
| so it has to be less then that. |



