## Lesson 18: Diagrams and Equations for Word Problems

* Let’s connect diagrams and equations to situations.

### Warm-up: Notice and Wonder: Diagrams

What do you notice? What do you wonder?







### 18.1: Card Sort: Situations, Equations, and Diagrams

Your teacher will give you a set of cards showing situations, equations, and diagrams.

Sort the cards into groups so that the cards in each group represent the same situation. Be ready to explain your reasoning.

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| A | Clare had 225 beads. A friend gave her a pack of 48 beads. Then she used 70 beads to make a necklace. How many beads does Clare have now? |
| B | Diagram. One rectangle split into 8 parts. One part labeled 225. Other 7 parts labeled 10. Total length, question mark. |
| C | $225−\left(6×10\right)=?$ |
| D | Elena has 7 notebooks. Each notebook has 10 paper clips in it. Elena also has a box of 225 paper clips. How many paper clips does Elena have? |
| E | $225+\left(6×10\right)=?$ |
| F | $?=225+48−70$ |
| G | Andre has 225 crayons. He buys 6 more packs and each pack has 10 crayons. How many crayons does Andre have now? |
| H |  |
| I | Diego has a collection of 225 baseball cards. He gets 35 more cards from a friend, then buys 72 cards. How many cards does Diego have now? |
| J | Han has 225 beads. Then he makes 6 bracelets for his friends. Each bracelet has 10 beads. How many beads does Han have now? |
| K | Diagram. One rectangle split into 3 parts. Total length, question mark. One part labeled 225, one part labeled 35, one part labeled 72. |
| L | $?=\left(7×10\right)+225$ |

### 18.2: Makes Sense to Me: A Gallery Walk

1. Your teacher will assign a problem to your group. Work together to solve your assigned problem.
2. Create a poster of your group’s solution. Organize your work so that it can be followed by others.
3. As you visit other groups' posters, consider how each answer makes sense.
* Choose one poster and make a comment on the solution. Write on your sticky note how you know the answer makes sense.



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