Name:

Date:

Unit 3 Review

Doing the problems in this section will help you to evaluate which types of problems you feel comfortable with and which ones you need more help with. Solve each problem as completely as you can. The table at the end of the closure section has answers to these problems. It also tells you where you can find additional help and practice on problems like these.

Solve each problem as completely as you can.  The table at the end of this closure section provides answers to these problems.  It also tells you where you can find additional help and where to find practice problems like them.

**CL 3-118.** For the *x* → *y* table below, fill in the missing values and find the rule.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| IN (x) | −10 | 0 | 5 | 1 | 25 | −6 | 8 | −1 | 6 | 10 |
| OUT (y) |  | 5 |  | 3 | −45 | 17 |  |  |  | −15 |

**CL 3-119.** One year ago, Josie moved into a new house and noticed a beautiful vine growing on the back fence. She recorded the data in the table below.

|  |  |  |  |
| --- | --- | --- | --- |
| Weeks Since Josie Moved In | 4 | 5 | 6 |
| Height of Vine (in inches) | 16 | 19 | 22 |

Assume that the vine continues to grow at a constant rate as you answer the questions below.

* 1. How tall was the vine 7 weeks after Josie moved in?
	2. How tall was the vine 3 weeks after Josie moved in?
	3. How tall was the vine when Josie moved in? How do you know?
	4. Predict how tall the vine was 19 weeks after Josie moved into her house. Justify your answer.
	5. Predict when the vine reached the top of the garage (94 inches tall). How did you find your answer?
* **CL 3-120.** Clifford is making a really big white cake for his sister’s birthday.  The recipe calls for 1.5 times as much flour as sugar.  It also calls for $\frac{1}{2}$ as much butter as sugar.  All the butter, flour, and sugar together total 7.5 cups.  How much butter, sugar and flour does Clifford need?  Write and solve an equation.  Remember to define your variable and to state your answer in a sentence.
* **CL 3-121.** Simplify the expression 3*x*2 − 5*x* − 4 + *xy* − (2*xy* + 2*x*2). Then evaluate the result if *x* = −1 and *y* = 6.
* **CL 3-122.** Follow the order of operations to simplify each expression below.
	1. 62 − (5 − 4) + 2(8 − 22) ÷8
	2. 
*
* **CL 3-123.** Raphael had 5 hits in 7 at bats. If he continues this pattern, how many hits will he have in 210 at bats?
* **CL 3-124.** Solve 6 − *x* − 3 = 4*x* − 12 for *x*, recording your steps as you work.
* **CL 3-125.** Make an *x* → *y* table from the points on the graph at right. Then write a rule for the table.
* **CL 3-126.** Jessica was solving an equation. After she finished simplifying, her result was 0 = 2. This result confused her. Explain to Jessica what her result means. Explain your reasoning thoroughly.
* **CL** **3-127.**For each of the problems above, do the following:
	1. Draw a bar or number line that represents 0 to 10.
	
	2. Color or shade in a portion of the bar that represents your level of understanding and comfort with completing that problem on your own.
* If any of your bars are less than a 5, choose *one* of those problems and complete one of the following tasks:
	1. Write two questions that you would like to ask about that problem.
	2. Brainstorm two things that you DO know about that type of problem.
* If all of your bars are a 5 or above, choose *one*of those problems and do one of these tasks:
	1. Write two questions you might ask or hints you might give to a student who was stuck on the problem.
	2. Make a new problem that is similar and more challenging than that problem and solve it.