|  |
| --- |
| Core \_\_\_\_\_\_\_ Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Score /12DIRECTIONS:* **ALL** problems **MUST** show some kind of evidence of work to receive credit; work may include computation, diagrams, explanations, and/or any other work that shows your thinking and problem solving strategies.
* You are expected to use resources such as dictionaries, math textbooks, websites, and calculators (for checking computation only) to assist you in the completion and checking of each problem.
* You are expected to take advantage of “Quick Checks”.
 |
| **A)** Simplify. Show all work, one step at a time.  *p* - 5(2 - 3*p*) + 1Quick estimate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Final complete answer (work including all steps): Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **B)** Find the difference. $$15\frac{3}{14}-18\frac{11}{21}$$Proof: (Algorithm must be worked vertically.)Final complete answer:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **C)** Solve. Show all work, one step at a time. $$\frac{x}{2}-3=1$$Quick estimate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Final complete answer (Work including all steps): Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **D)** Students collected $212 to help the victims of a flood. A large company donated an additional $2 for every dollar the students collected. Write and solve an equation that shows the entire amount of money that was given the flood victims. Quick estimate of final amount: \_\_\_\_\_\_\_\_\_\_\_\_\_\_Final complete answer (Includes the equation and the work steps leading to the solution.): Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **E)** Find the value of b. $$\frac{b-2}{5}+8=11$$Quick estimate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Final complete answer (work including all steps): Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **F)** The circumference of a can of soda is  inches. The circumference of a can of tuna fish is  inches. How much greater is the circumference of the can of tuna fish than the can of soda?Quick estimate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Proof: *(Algorithm must be worked vertically.)*Final complete answer:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **G)** What is an expression for the missing value in the table?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Position | 1 | 2 | 3 | *n* |
| Term | 1 | 8 | 27 |  |

Quick estimate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Final complete answer:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **H)** If $x^{3}= -729$, which of the following statements must be true? A. x must be a positive integerB. x must be a negative integerC. x could be a positive integer or a negative integerD. It is not possible to determine if x is positive or negative. Quick estimate: Letter \_\_\_\_\_\_Proof: Final complete answer:\_\_\_\_\_\_\_Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **I)** At 9:05 AM, Emma arrived at school late, running through the front door of the school. She had left home 27 minutes earlier. At what time did Emma leave home? Quick estimate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Proof: Final complete answer:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **J)** Simplify the expression. $$3\frac{3}{x} ∙ \frac{2}{3} ∙2\frac{x}{x}$$Quick estimate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Proof: Final complete answer:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **K)** Which equation might be used to find the number of mosquito bed nets (*N)* that could be purchased with $630 if the cost of the nets was $10 each? *n = 630***2**= 630*=n*Quick estimate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Proof:Final complete answer:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **L)** Explain why a right triangle cannot have an obtuse angle. Quick ideas: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Proof:Final complete answer:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Resource used to check: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |



**\*\* Baker’s Dozen Bonus \*\***

DIRECTIONS:

* **NO HELP FROM PARENTS OR ANY OTHER PERSON ON THIS BONUS!**
* **YOU MAY NOT USE ANY RESOURCES SUCH AS BOOKS OR ELECTRONIC RESOURCES!**
* You **MUST** show some kind of evidence of work to receive credit; work may include computation, diagrams, explanations, and/or any other work that shows your thinking and problem solving strategies.

 What is the missing number? Explain the entire pattern.

**49**

?

4

9

8

2

**72**

8

7

3

4

4