

## Round 1, Question 1

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

Evaluate:  $93 - 64$

## Round 1, Question 2

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

Vincent has  $X$  cookies. He gives one to his dog and eats one fourth of the rest. How many cookies remain?

## Round 1, Question 3

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

$X$  people are playing single elimination racquetball. How many games must be played for a winner to be declared?

## Round 1, Question 4

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

A rectangle with integer side lengths has area  $X$ . What is the greatest possible value for its perimeter?

## Round 2, Question 1

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

What is the volume of a spherical scoop of ice cream with radius 3?

## Round 2, Question 2

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

A circle has area  $X$ . What is its diameter?

## Round 2, Question 3

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

How many diagonals does an  $X$ -sided polygon have?

## Round 2, Question 4

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

What is the smallest number greater than  $X$  with exactly four distinct positive divisors?

## Round 3, Question 1

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

Evaluate  $78/13$ .

## Round 3, Question 2

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

What is the sum of the first  $X$  positive integers?

## Round 3, Question 3

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

Amy traveled  $X$  miles in 7 minutes. How many miles could she travel in 9 minutes?

## Round 3, Question 4

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

What is the surface area of a cube with volume  $X$ ?

## Round 4, Question 1

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

Courtney catches three fish per day. If each fish sells for ten dollars, how much money, in dollars, does she make from selling fish in a week?

## Round 4, Question 2

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

How many factors does  $X$  have?

## Round 4, Question 3

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

When I roll two  $X$ -sided die, what is the probability that they show the same number?

## Round 4, Question 4

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

The ratio of pigs to goats in a pen is  $X$ . If there are a total of 20 animals, how many goats are there?



## Round 5, Question 1

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

Randy eats three times as fast as Terry. If Terry can eat a hotdog in twelve minutes, how many minutes does it take Randy to eat a hotdog?

## Round 5, Question 2

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

Kelly walks around a circular pool  $X$  times. If the circumference of the pool is 6 feet, how far did she walk?

## Round 5, Question 3

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

A cake shaped like a rectangular prism has a base area of 4 and a volume of  $X$ . What is the height of the cake?

## Round 5, Question 4

*General Instructions: In all questions after Question 1 of each round, the capital letter  $X$  represents the answer to the previous question. Once you solve your question, write only a numerical answer on the answer sheet; do not include units.*

Ben can buy a panda for  $X$  dollars and a dolphin for  $2X$  dollars. If he bought two pandas and one dolphin, how much money did he spend?