St. Johnsbury Academy
Algebra Placement Exam 23-24

Placement Exam Instructions

This placement exam can help you determine which level of Algebra your student is ready for at St. Johnsbury Academy. The exam is only one documented indicator and is not perfect, so when making any final placement decision teacher recommendation would still be necessary and considered.

The student should work independently without the use of a calculator. It is not necessary to time the test, but most students will finish in less than 1 hour.

Scoring

The test is divided into two sections. Section 1 includes problems 1-5; this is the simpler part of the test, covering material from the first half of Pre-Algebra. Section 2 includes problems 6-13; it is covering material from the second half of Pre-Algebra. Section 3 includes problems 14-22 and these are problems from our Algebra 1 curriculum.

It is recommended that the student show all work on the problems as this will allow the Department Chair to make a sound decision on placement into not only the course, but which level within a course, Standard or Accelerated levels. Correct answers are wonderful, but we are looking at the key indicators of correct processes within each problem. It is more beneficial for a student to show work than to just write down an answer. Try your best and show what you can.

Student Name: Leila Flanagan Date Administered: _____

Sending School: Stowe High School 8th Grade Math Teacher: Robyn Butler

Overall Placement Exam Score: _____ Recommendation based on Exam: _____

Teacher Recommendation based on classroom experience: _____

Section 2

6) Convert 34,320 feet into miles. (1 mile = 1,760 yards; 1 yard = 3 feet)

7) Convert $\frac{7}{8}$ to a decimal.

8) The water tank had a maximum capacity of 84 gallons. If the tank was $\frac{2}{7}$ full, how many gallons of water did it have?

9) George cut $\frac{2}{3}$ of the pie and put that giant piece on his plate. Then he ate $\frac{1}{4}$ of that piece. What fraction of the original pie did George eat?

15) Simplify $(ab^7)^3$

16) Solve $-3 + 2(7m - 7) = -129$

17) Solve and graph your outcome on the number line

$2 + 9x < 137$

18) Write the equation of the line through the points (1, 0) and (5, – 5), in y = mx + b form

19) Simplify and make sure any fractions are fully reduced.

$$\frac{2x}{25} \times \frac{5x}{16x}$$