



Are you ready for Beast Academy 4B?



Before beginning Beast Academy 4B, a student should have a solid understanding of angles, shape classification, multi-digit multiplication, and exponents.

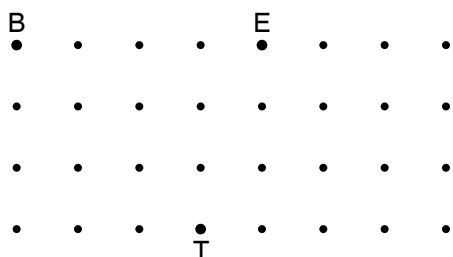
A student ready for Beast Academy 4B should be able to answer at least 13 of the 18 problems below correctly.

Step 1. The student should try to answer every question without a calculator and without help.

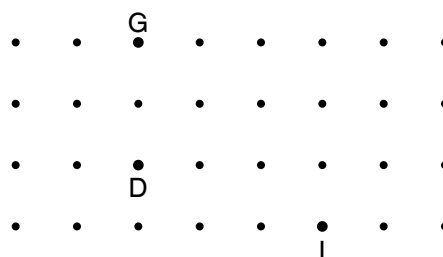
Step 2. Check the student's answers using the solutions at the end of this document.

Step 3. The student should be given a second chance on problems that he or she answered incorrectly.

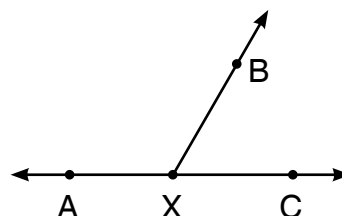
1. Label point S on the dot grid below so that quadrilateral BEST is a parallelogram.



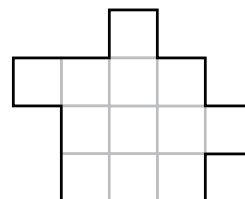
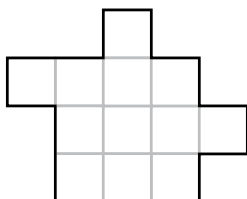
2. Label point R on the dot grid below so that quadrilateral GRID is a kite.



3. The measure of angle AXB is twice the measure of angle BXC. Without using a protractor, find the measure of angle BXC.



4. Shade the square that could be removed from the shape below to leave a shape with at least one **line** of symmetry.
5. Draw a cut line along the grid to split the shape into two pieces so that both pieces have **rotational** symmetry.





Are you ready for Beast Academy 4B?

Compute each product.

6. $9 \times 327 =$ _____

7. $27 \times 64 =$ _____

8. $17 \times 2,003 =$ _____

9. $2,020 \times 701 =$ _____

Rewrite each multiplication expression as a power.

10. $2 \times 2 \times 2 \times 2 =$ _____

11. $13 \times 13 \times 13 \times 13 \times 13 =$ _____

Compute the value of each power.

12. $8^2 =$ _____

13. $5^4 =$ _____

Fill in the missing exponent in each equation.

14. $2^3 \times 2^7 = 2^{\square}$

15. $7 \times 7^{\square} = 7^5$

Answer each question below.

16. How can the number 80 be written as the sum of two powers of 2?

16. $80 =$ _____ $+$ _____.

17. The product $147 \times 594 \times 912$ ends with the digit _____.

18. Write 49^3 as a power of 7.

18. _____