You will not be allowed to use any type of calculator whatsoever, you will not be allowed to have any other notes, the test will be closed book, and there is no escape. The actual test will be graded in red ink! There will be no mercy for the weak. Mathematics is cumulative. Deal with it. What you don’t know will hurt you. You need to be able to make simple and/or standard simplifications. In order to get credit or partial credit, your work must make sense.

I strongly suggest that you take this practice test under the conditions of the actual test! I strongly suggest that you do the same with both of the last practice tests, and with the actual tests as well! This test is only a supplement to those tests. The final exam is cumulative! Be ready!

1. Here are pairs of similar triangles. Find $x$ in the pictures below:

![Triangle with sides 30, 9, 6 and x](image1)

![Triangle with sides 25, 4, 5 and x](image2)

![Triangle with sides 15, 36, and x](image3)

2. A right triangle has legs with lengths 5 and 12. What is the length of the hypotenuse?
3. Another right triangle has a leg with length 8, and its hypotenuse has length 10. What is the length of the remaining leg?

4. Two of the interior angles of a triangle are 10° and 20°. What is the measure of the remaining interior angle?

5. A circle has a radius of 4 inches. What is the area and circumference of this circle?

6. Know all of the same basic geometry formulas that you had to know for the last quiz.

7. Here is a right circular cone with radius $r$, and height $h$.

![Diagram of a right circular cone](image)

The volume of this cone could be:

(a) $\frac{1}{3} \pi rh$.
(b) $\frac{1}{3} \pi r^2 h$.
(c) $\frac{1}{3} \pi r^3 h$.
(d) None of the above.

8. Find the least common multiple of $2^5 3^4 5^2$ and $2^3 3^5 5^6$.

9. Find the least common multiple of 21 and 28, and then compute:

$$\frac{4}{21} + \frac{3}{28}.$$

10. Find the least common multiple of 245 and 343.