

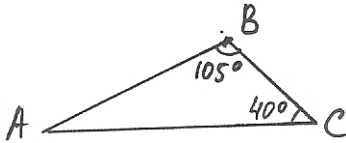
**BRONX COMMUNITY COLLEGE**  
of The City University of New York

**DEPARTMENT OF MATHEMATICS and COMPUTER SCIENCE**

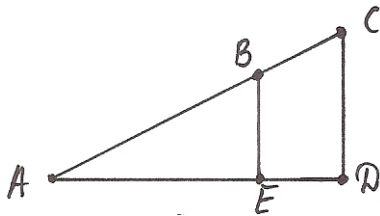
**MATH 04**

**Review for Test 2**

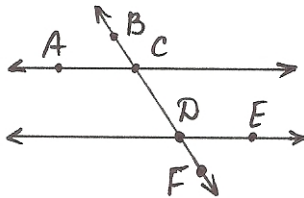
1. Find  $\angle A$



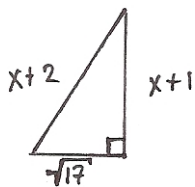
2. If one acute angle of a right triangle is  $62^\circ$ , find the other acute angle.  
3. Given  $\overline{CD} \perp \overline{AD}$ ,  $\overline{BE} \perp \overline{AD}$ , and  $\angle C = 53^\circ$ , find  $\angle A$ ,  $\angle ABE$ ,  $\angle EBC$



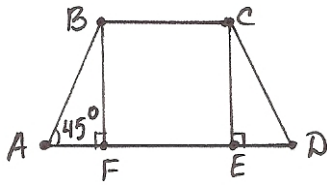
4. Given  $AC \parallel DE$  and  $\angle ACD = 140^\circ$ , find  $\angle CDE$ ,  $\angle EDF$ ,  $\angle ACB$



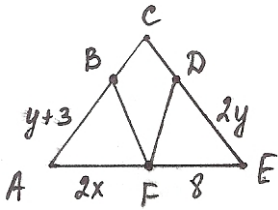
5. Find  $x$  (hint: use Pythagorean Theorem)



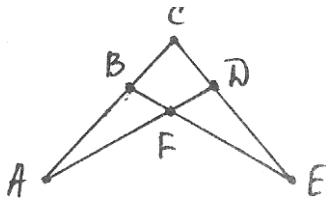
6. Given  $\triangle ABF \cong \triangle CDE$ , find  $\angle D$ ,  $\angle DCE$



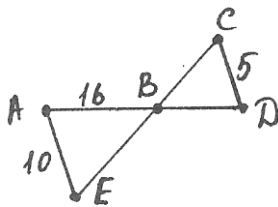
7. Given  $\triangle ABF \cong \triangle FDE$ , find  $x$  and  $y$ .



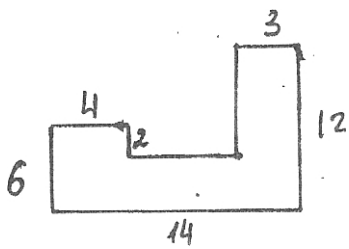
8.  $AF = FE$  and  $\angle A = \angle E$ . Identify congruent triangles and name the property used.



9. Given  $\overline{AE} \parallel \overline{CD}$ , find  $DB$

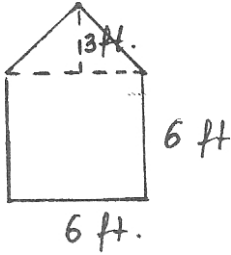


10. Find the distance around the figure.



11. If the area of a circle is  $36\pi$  sq. ft., find the radius.

12. Find the area of the figure.



13. Find the slope of the line through the points:  $(-10, 2)$  and  $(-4, -4)$

**Solution:** Let's use formula  $m = \frac{y_2 - y_1}{x_2 - x_1}$ .  $m = \frac{(-4) - 2}{(-4) - (-10)} = \frac{-6}{6} = -1$ .

**Answer:**  $m = -1$

14. Identify the slope and  $y$ -intercept:  $y = \frac{2}{3}x + 4$

**Answer:**  $m = \frac{2}{3}$ ,  $y$ -intercept = 4

15. Graph the equation:  $4x - 3y = 12$

16. Write the standard form of the equation of the line that passes through the point  $(-6, 3)$  and has the slope  $m = -\frac{1}{2}$

**Solution:** We'll use point-slope form of the equation:  $y - y_1 = m(x - x_1)$ .

$$y - 3 = -\frac{1}{2}(x - (-6)).$$

$$LCD = 2; \text{ let's multiply both sides by the } LCD: 2 \cdot (y - 3) = -\frac{1}{2}(x - (-6)) \cdot 2,$$

$$\text{or } 2y - 6 = -(x - 6), \text{ or } 2y - 6 = -x + 6;$$

finally, move  $-x$  to the left side and  $-6$  to the right side: **Answer:**  $x + 2y = 12$

17. Write the standard form of the equation of the line that passes through the points:  $(4, 3)$  and  $(4, -2)$

**Solution:** note that both points have the same  $x$ -coordinate, hence it is a vertical line.

**Answer:**  $x = 4$

18. Use integer values of  $x$  from  $-2$  to  $+2$  to make a table of values for the equation  $y = x^3$ . Graph the points, and draw a smooth curve through them.

$x$	$y$
-2	-8
-1	-1
0	0
1	1
2	8

19. Graph the inequality  $y > \frac{2}{3}x + 3$  in the plane.

There will be no such problems on the Test 2.