

ACP Geometry Summer Packet 2019

This packet should help you prepare for Geometry at Trumbull High School. Please complete over the summer.

Simplify each expression. If the answer is not a whole number, leave it as a fraction.

1. $3x^2 + xy - 6y^2$ when $x = -4$ and $y = \frac{1}{2}$

2. $[2^3 + 4(7 - 3)] \div 8$

3. $-3|6 - 12|$

4. $\frac{(-5)(-2) - 4}{-4\left(\frac{1}{3}\right)}$

5. $\frac{\frac{4}{5}}{2 - \frac{1}{3}}$

6. $6x^2(3x^3 - 4x + 4)$

7. $2(7g - 4h) - 6(5h - 3g)$

8. $(2y - 3)(y + 7)$

9. $(2x - 5)^2$

10. $\frac{14x^2 + 42x - 7}{7}$

Solve for the variable. If the answer is not a whole number, leave it as a fraction.

11. $75 = 3(-6n - 5)$

12. $-4x + 2(5x - 6) = -3x - 39$

13. $-16 + 5n = -\frac{1}{2}(-6 + 8n) + 3$

14. $12(2k + 11) = 12(2k + 12)$

15. $5 - 3(2n - 3) = 44$

16. $\frac{5}{x} = \frac{3}{2}$

17. $\frac{-4}{2r - 9} = \frac{-16}{3r + 14}$

18. $\frac{x}{x + 5} = \frac{x - 4}{x}$

Solve each system of equations.

19. $4(e + f) = 8(f - 4)$
 $2(e - 1) = f - 15$

20. $2x - 3y = -1$
 $y = x - 1$

21. $-7x - 2y = -13$
 $x - 2y = 11$

22. $2x - 8y = 6$
 $-5x - 20y = -15$

Solve each quadratic by factoring.

23. $y^2 - 9 = 0$

24. $w^2 + 3w = 10$

25. $3v^2 = v + 10$

26. $3p^2 - 2p - 5 = 0$

27. $7x^2 + 53x + 28 = 0$

28. $16x^2 + 56x + 49 = 0$

Find the slope of the line through the points and identify the line as horizontal, vertical or oblique.

29. $(-3,5)$ and $(-3,8)$

30. $(7,10)$ and $(12,10)$

31. $(2,19)$ and $(7,4)$

Write the equation of the line in slope- intercept form with the given information.

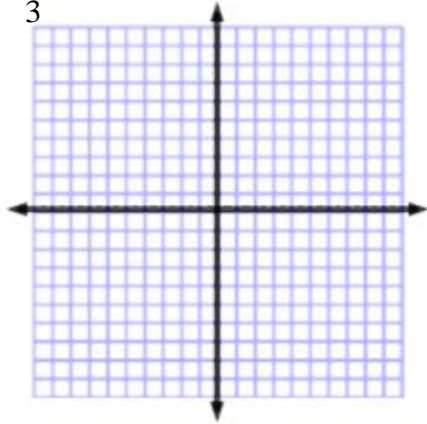
32. With slope $-\frac{1}{2}$ and y -intercept -8

33. Through the point $(-6,7)$ with slope $-\frac{1}{3}$

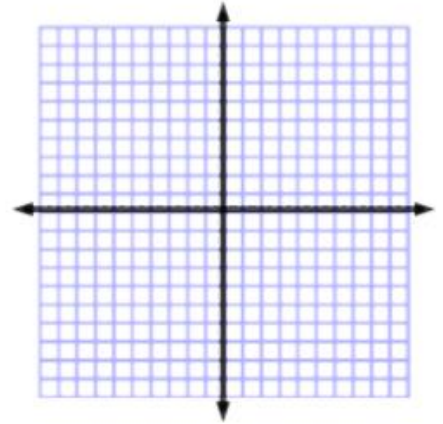
34. Through the points (5,9) and (0,8)

Graph each equation.

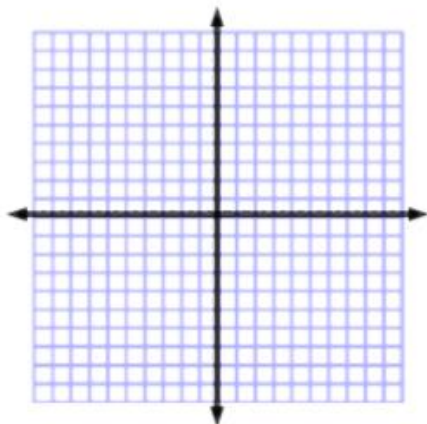
35. $y = \frac{5}{3}x - 6$



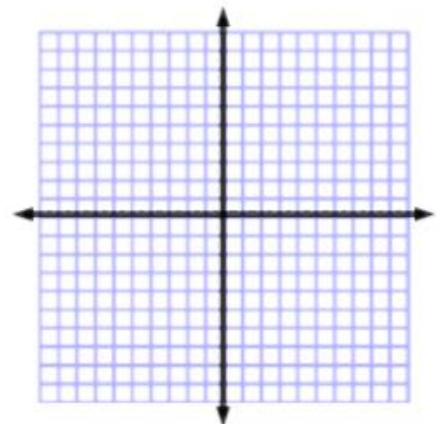
36. $y = -4$



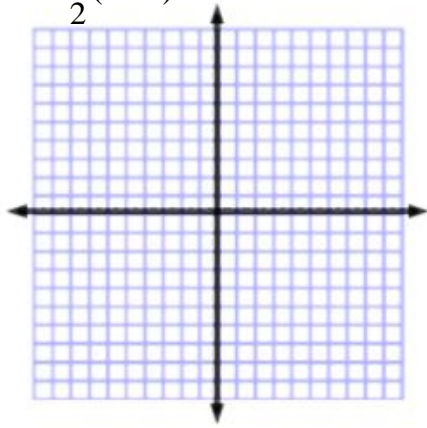
37. $2x - 3y = -6$



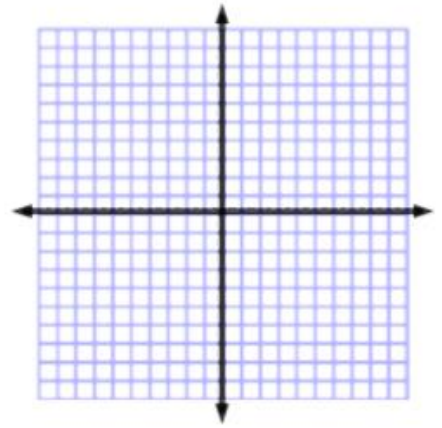
38. $x + 5y = 10$



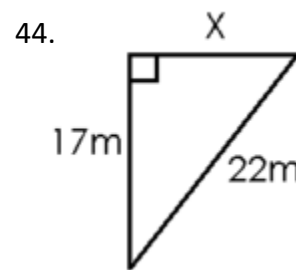
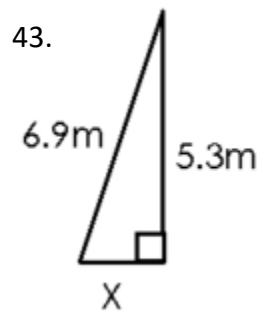
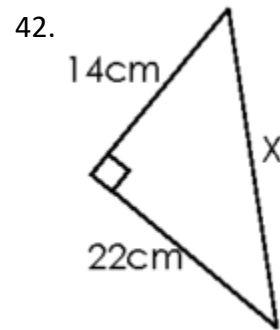
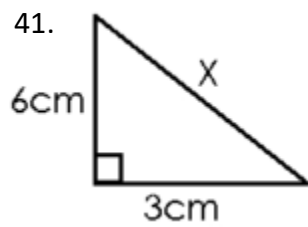
39. $y+7 = \frac{1}{2}(x-6)$



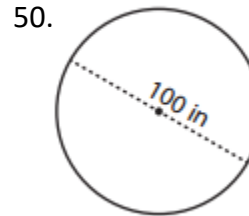
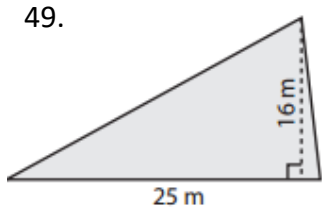
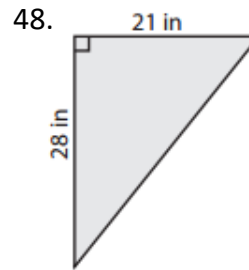
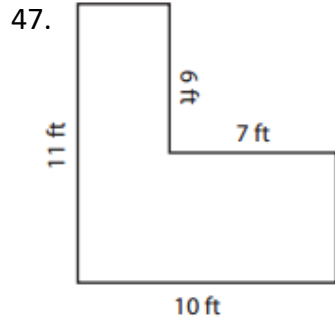
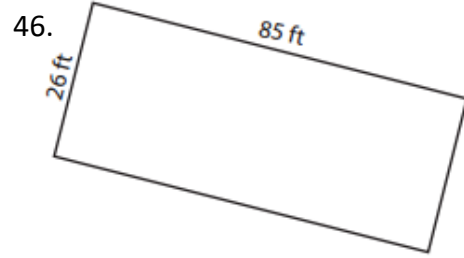
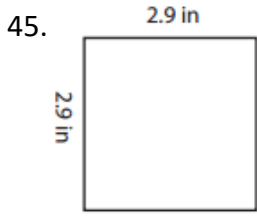
40. $x = -3$



Use the Pythagorean Theorem to find the length of the missing side. Round to the nearest tenth.



Find the area of each figure. (Hint: you may need to look up the formulas if you do not remember.)



Find the surface area and volume of the rectangular prism.

