

Equations 2 Review WS

Exercises 1-13 are multiple choice. Please circle the letter of the best answer.

1. Solve for w : $V = lwh$

(a) $w = \frac{V}{lh}$ (b) $w = V - lh$ (c) $w = V - l - h$ (d) $w = \frac{V}{l} - h$

2. Solve for y : $2x + 3y = 11$

(a) $y = -\frac{11}{2}x - \frac{2}{3}$ (b) $y = -\frac{2}{3}x + \frac{11}{3}$ (c) $y = -2x + 8$ (d) $y = \frac{2}{3}x + \frac{11}{3}$

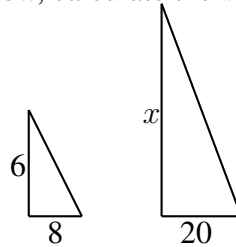
3. The ratio of As to Bs in the class is 2 to 5. If there are 14 As, how many Bs are in the class?

(a) 20 Bs (b) 12 Bs (c) 140 Bs (d) 35 Bs

4. The ratio of Wii fans to XBox fans is 7 to 4. If there are 32 XBox fans, how many Wii fans are there?

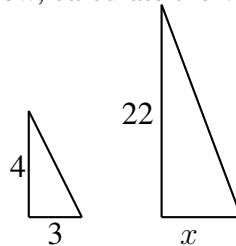
(a) 56 Wii fans (b) 11 Wii fans (c) 43 Wii fans (d) 28 Wii fans

5. Given the similar triangles in the figure below, calculate the value of x :



(a) $x = 20$ (b) $x = 18$ (c) $x = 15$ (d) $x = 10$

6. Given the similar triangles in the figure below, calculate the value of x :



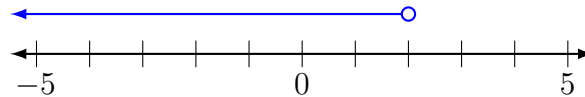
(a) $x = \frac{17}{2}$ (b) $x = \frac{33}{2}$ (c) $x = 3$ (d) $x = 21$

7. One hundred fifty (150) Beaverton High students were interviewed to determine which nearby school was Beaverton's fiercest rival. The results of the survey are shown in the table below. If there are 2000 students at Beaverton High School, what is the expected number of students who think Southridge is Beaverton's fiercest rival?

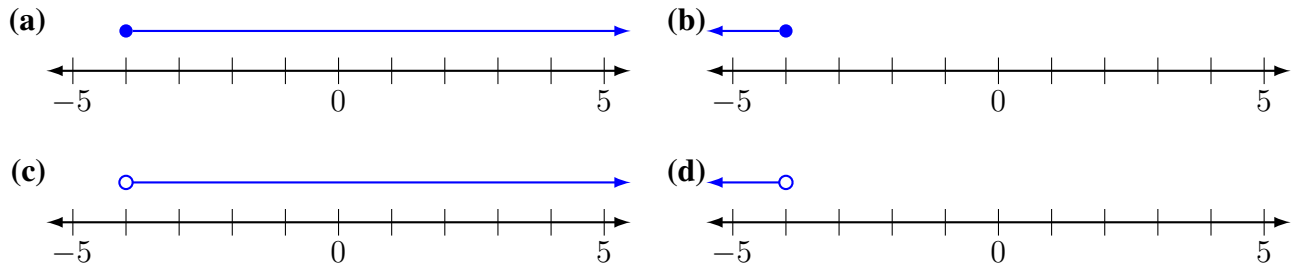
Rivalry Survey

Jesuit	Southridge	Aloha
77	63	10

- (a) 1000 students (b) 840 students (c) 1160 students (d) 630 students
8. Which inequality is graphed below?



- (a) $x \geq 2$ (b) $x \leq 2$ (c) $x < 2$ (d) $x > 2$
9. Which graph matches the inequality $x \geq -4$?



10. Solve the inequality: $4x < 9$

- (a) $x < \frac{9}{4}$ (b) $x > \frac{9}{4}$ (c) $x < 5$ (d) $x > 5$

11. Solve the inequality: $3x - 2 \geq 6$

- (a) $x \geq \frac{8}{3}$ (b) $x \leq \frac{8}{3}$ (c) $x \geq 5$ (d) $x \leq 5$

12. Solve the inequality: $5x - 12 \geq -2x + 9$

- (a) $x \geq -3$ (b) $x \leq -3$ (c) $x \leq 3$ (d) $x \geq 3$

13. Solve the inequality: $-5x \leq 10$

- (a) $x \leq -2$ (b) $x \geq -2$ (c) $x \leq 2$ (d) $x \geq 2$

Solve each equation for the requested variable. Remember to show your work.

14. Solve for A : $AB + 3C = D$

15. Solve for W : $P = 2L + 2W$

16. Solve for M : $LM - D = E$

17. Solve for D : $LM - D = E$

Solve each equation for y . Remember to show your work.

18. $x - y = 2$

19. $-2x + 6y = -12$

20. $10x + 5y = -20$

21. $3x - 2y = 6$

22. $2x + 4y = 8$

23. $-x - 3y = 6$

24. $-5x - y = -10$

25. $2x + 3y = -9$

26. $2x + 3y + 9 = 5x - y + 10$

Solve each proportion. Remember to show your work.

27. $\frac{8}{2} = \frac{x+3}{x+1}$

28. $\frac{x+2}{3} = \frac{x-1}{2}$

29. $\frac{4}{x} = -\frac{5}{30}$

30. $\frac{4}{3} = \frac{x+4}{x}$

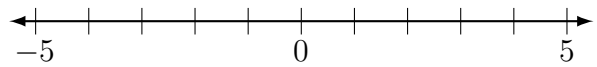
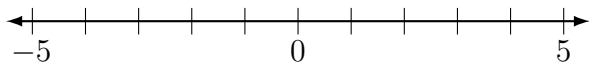
31. $\frac{3}{x} = -\frac{1}{20}$

32. $\frac{x}{2} = -\frac{5}{20}$

Solve each inequality and graph your solution. Remember to show your work.

33. $5x < -20$

34. $5x - 2 \leq 13$



35. $2x - 3 \geq 4x + 7$

36. $3x - 5 < 7x + 3$

