

Solve:

1. $\frac{x}{4} - \frac{4+x}{6} = 2$

2. $\frac{x+3}{3} - \frac{x-2}{6} = 2$

3. $\frac{x}{6} - \frac{x+6}{9} = \frac{2}{3}$

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

5. $\frac{x}{2} - \frac{4+x}{6} = 4$

6. $\frac{x+3}{2} - \frac{x+1}{4} = 2$

7. $\frac{x}{9} - \frac{x+3}{6} = \frac{1}{3}$

8. $\frac{a+6}{5} - \frac{4}{3} = \frac{6a-5}{4}$

9. $\frac{x}{2} - \frac{2+x}{4} = 2$

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

11. $\frac{x}{6} - \frac{x+4}{8} = \frac{1}{2}$

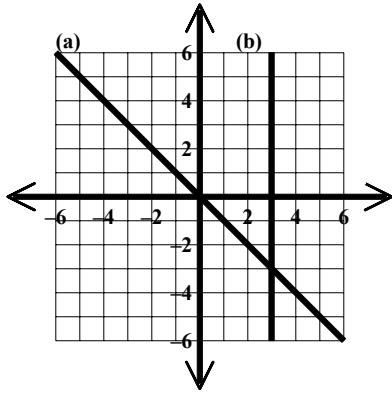
12. Find three consecutive odd integers such that the sum of the first and third equals the sum of the second and 31.

13. Find four consecutive even integers such that 4 times the sum of the first and second is 4 more than 7 times the fourth.

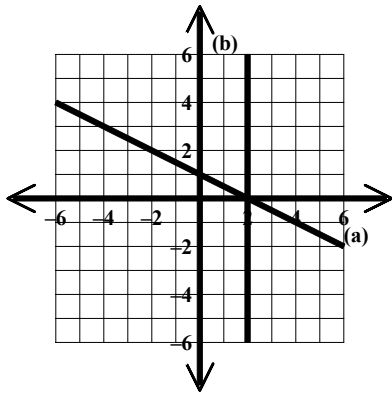
14. Only $\frac{1}{3}$ of the university students majored in social sciences. If 1720 did not major in social sciences, how many university students were there?

15. The sum of three consecutive integers is 132. What are the integers?

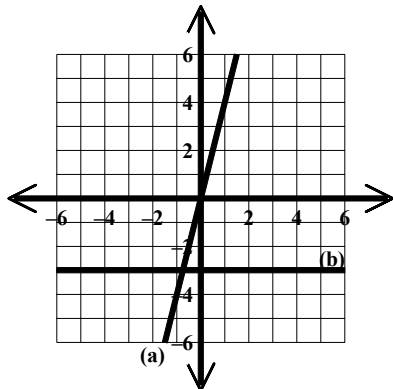
16. Find the equations of lines (a) and (b).



17. Find the equations of lines (a) and (b).



18. Find the equations of lines (a) and (b).



19. Use the slope-intercept method to graph the following equation: $y = \frac{1}{2}x + 3$
20. Graph the following equation on a rectangular coordinate system: $3x + y + 1 = 0$
21. Write the following numbers in scientific notation:
(a) 139,000 (b) 0.0000139
22. Write the following numbers in scientific notation:
(a) 0.00000846 (b) 84,600

Factor.

23. $x^3 + 12x^2 + 32x$
24. $-6 - 4x + 2x^2$
25. Factor: $-40x^2 - 26x + 30$
26. Solve the system by the elimination method: $2N_Q - 3N_D = -12$
 $3N_Q + 3N_D = -3$