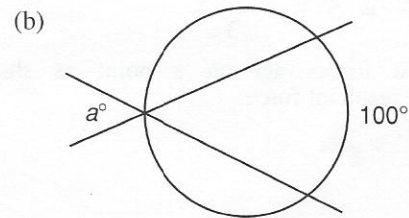
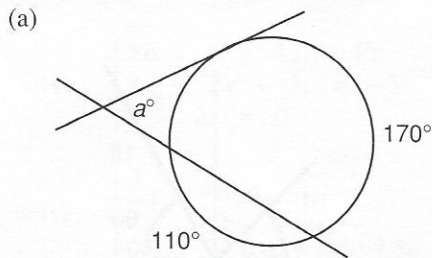


- The volume of a quantity of an ideal gas was held constant. The initial pressure and temperature were 1600 newtons per square meter and 240 kelvins. What was the final temperature if the pressure was reduced to 1200 newtons per square meter?
- Chad drove 3 times as fast as Katy could pedal. In fact, Chad drove 90 miles in 2 hours less than it took Katy to pedal 40 miles. How fast could each of them travel? How long did they travel?
- Three times the number of blue marbles exceeded twice the number of red marbles by 18. Also, 5 times the number of blue marbles was 2 less than 6 times the number of red marbles. How many of each were there?
- Begin with $ax^2 + bx + c = 0$ and complete the square to derive the quadratic formula.
- Use the quadratic formula to solve: $2x^2 + 3 = -2x$.
- Find the measures of the angles labeled a .



7. Find c : $pk = p\left(\frac{1}{cm_1} - \frac{1}{m_2}\right)$

8. Add: $\frac{3x + 1}{x + 5} + \frac{2x - 3}{x^2 + 3x - 10}$

Simplify:

9. $\frac{3\sqrt{2} - 4}{\sqrt{3} - 2}$

10. $-3\sqrt{9\sqrt{3}}$

11. $\sqrt{x^2 a^{1/2} y^2 a^3 x^0 y^3}$

12. $\frac{-5^2}{-27^{-2/3}}$

13. $c - \frac{\frac{2}{c}}{x - \frac{x}{c}}$

14. $(3i + 2)(2i - 3) - \sqrt{-16} - 2i^2 + i^3$

15. Find the equation of the line that passes through $(3, -1)$ and is perpendicular to the line that passes through $(-5, 2)$ and $(-1, 7)$.

16. Estimate the location of the line indicated by the data points. Write the equation that gives carbon (C) as a function of iodine (I): $C = ml + b$

17. (a) Write $-3R + 3U$ in polar form.
 (b) Write $3\angle -60^\circ$ in rectangular form.

18. Solve $3x^2 + 4 = 2x$ by completing the square.

19. Solve: $3 + \sqrt{4x - 5} = 12$

20. Find X .

