

- Bonnie drove 540 miles in three times the time it took Buffy to travel 135 miles. Buffy's speed was slower than Bonnie's by 15 miles per hour. Find the rate and time of each.
- When the wildlife commission was finished, $\frac{1}{5}$ of the population of beavers had been observed. If the beaver population numbers 34,260, how many beavers were observed?
- A barrel contains 30 gallons of 40% antifreeze. How many gallons of an 80% antifreeze solution should be added to make the barrel contain 50% antifreeze?

Simplify:

4. $\frac{a^{3x}(c^{2m})^x a^{x/2}}{c^{mx/3}}$

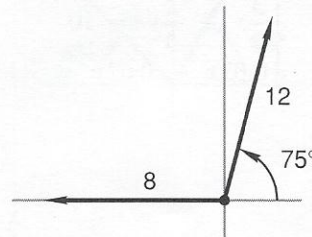
5. $\frac{(x^{a-3})^3}{x^{-3-2a}}$

6. $\frac{a}{b + \frac{1}{b + \frac{x}{c}}}$

7. Add: $\frac{2a - 3}{a - c} - \frac{3a - 1}{c - a}$

8. Solve: $\begin{cases} 2x - 3y - 3z = 2 \\ x + 5y + 2z = -3 \\ x + 2y = 0 \end{cases}$

9. Two forces are applied to an object as indicated. Find the resultant force on the object.



Simplify:

10. $\frac{5 - 6i}{i - 3}$

11. $-\sqrt{-25} - \sqrt{2}\sqrt{-2} + \sqrt{-5}\sqrt{-5} + 3i - 2i^2 - 3i^3$

12. $3\sqrt{\frac{2}{3}} - 2\sqrt{150} + 3\sqrt{\frac{3}{2}}$

13. $\frac{-5 - 3\sqrt{5}}{2 - 4\sqrt{5}}$

14. Find p : $\frac{x + 3}{p} - m = c\left(\frac{a}{b} + x\right)$

15. Solve: $\begin{cases} x^2 + y^2 = 25 \\ x - y = 1 \end{cases}$

16. Graph: $-x - 3 \geq -1$; $D = \{\text{Reals}\}$



- Use unit multipliers to convert 3 square miles per hour to square feet per minute.
- Solve $2x = 3x^2 - 3$ by using the quadratic formula.
- Solve $2x^2 + 2x = -3$ by completing the square.
- Write equal ratios and find n in terms of a , c , and m .

