

- Ortiz drives twice as fast as his brother and therefore makes the 350-mile trip home in 5 hours less time. How fast does each drive, and for how long does each travel?
- A corn meal feed is 10% protein and a feed supplement is 40% protein. How much of each must be combined to get 2400 pounds of feed that is 19% protein?
- Seven times the larger number is 8 more than four times the smaller. Also, three times the smaller is 19 less than twice the larger. What are the numbers?

Solve:

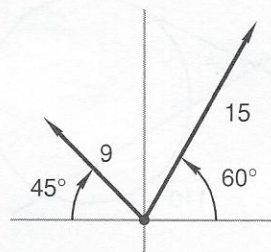
$$4. \begin{cases} \frac{1}{4}x - \frac{1}{5}y = 2 \\ 0.03x - 0.4y = -1.64 \end{cases}$$

$$5. \begin{cases} x + y + z = 11 \\ 2x + y - z = 13 \\ x = 2y \end{cases}$$

$$6. \sqrt{c - 16} = 4 - \sqrt{c}$$

$$7. \frac{4x - 3}{7} = 5 + \frac{x - 2}{3}$$

8. The two forces act on a point as shown. Find the resultant force.

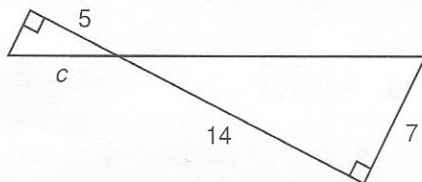


9. Use a calculator to simplify. Estimate first.

(a) $\frac{41,805 \times 10^3}{0.000395 \times 10^{-1}}$

(b) ${}^{2.3}\sqrt{362}$

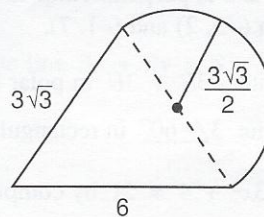
10. Find c .



11. Find b : $\frac{a}{m} = c\left(\frac{1}{x} + \frac{b}{y}\right)$

12. Solve $4 = 3x^2 + x$ by using the quadratic formula.

13. Find the area of this figure. Dimensions are in centimeters.



14. Add: $\frac{x - 5}{x^2 - 5x - 14} - \frac{2x}{7 - x}$

Simplify:

15. $\frac{\sqrt{5} - 3}{\sqrt{5} - 2}$

16. $3\sqrt{\frac{6}{11}} - 2\sqrt{\frac{11}{6}} - \sqrt{594}$

17. $(5\sqrt{16} - 3)(2\sqrt{10} + 2)$

18. $2c^2 + \frac{\frac{c^2}{a}}{a + \frac{c}{a}}$

19. $\sqrt{-16} - \sqrt{-3}\sqrt{-3} - \sqrt{-4}\sqrt{-4} + 3i - 3i^2 + 3i^3$

20. $\frac{-3^0(3^{-2})}{9^{-3/2}}$