Homework #14

Solve:

Make x the subject

Solve:

1. $\dfrac{x}{3} = 8$

9. $\dfrac{9y}{x} = 2$

17. $\dfrac{-k}{7} = 5$

2. $\dfrac{5}{x} = 7$

10. $y = 2x + 3$

18. $\dfrac{-2}{x} = 5$

3. $\dfrac{3x + 2}{4} = x + 3$

11. $y = x^2 - 4$

19. $2x - 5 = \dfrac{x + 2}{5}$

4. $x + 4 = \dfrac{x + 2}{3}$

12. $\dfrac{2y}{5} = \dfrac{5x + 2}{3}$

20. $\dfrac{2x + 2}{3} = 4x + 3$

5. $\dfrac{3x}{4} = \dfrac{5x + 2}{3}$

13. $y = 7x + 2$

21. $\dfrac{x}{3} > \dfrac{2x + 4}{7}$

6. $\dfrac{x}{4} + 7 = 2x + 5$

14. $4y + 3x = 5$

22. $\dfrac{2x}{5} + 7 = x - 5$

7. $\dfrac{5x + 2}{2} > x - 3$

15. $y = \sqrt{x + 5}$

23. $\dfrac{4x + 3}{6} > x - 2$

8. $\dfrac{x}{3} + \dfrac{5}{6} = 2$

16. $y = (x + 2)^2$

24. $\dfrac{x}{10} + \dfrac{7}{5} = 1$

Answers Homework #14

Solve:

1. $\dfrac{x}{3} = 8$

   $x = 24$

2. $\dfrac{5}{x} = 7$

   $5 = 7x$

   $x = {}^{5}/_{7}$

3. $\dfrac{3x + 2}{4} = x + 3$

   $3x + 2 = 4x + 12$

   $x = -10$

4. $x + 4 = \dfrac{x + 2}{3}$

   $3x + 12 = x + 2$

   $x = -5$

5. $\dfrac{3x}{4} = \dfrac{5x + 2}{3}$

   $9x = 20x + 8$

   $-8 = 11x$

   $x = {}^{-8}/_{11}$

6. $\dfrac{x}{4} + 7 = 2x + 5$

   $x + 28 = 8x + 20$

   $8 = 7x$

   $x = {}^{8}/_{7}$

7. $\dfrac{5x + 2}{2} > x - 3$

   $5x + 2 > 2x - 6$

   $3x > -8$

   $x > {}^{-8}/_{3}$

8. $\dfrac{x}{3} + \dfrac{5}{6} = 2$

   $2x + 5 = 12$

   $2x = 7$

   $x = {}^{7}/_{2}$

Make x the subject

9. $\dfrac{9y}{x} = 2$

   $9y = 2x$

   $x = \dfrac{9y}{2}$

10. $y = 2x + 3$

    $y - 3 = 2x$

    $x = \dfrac{y - 3}{2}$

11. $y = x^2 - 4$

    $y + 4 = x^2$

    $x = \pm\sqrt{y + 4}$

12. $\dfrac{2y}{5} = \dfrac{5x + 2}{3}$

    $6y = 25x + 10$

    $6y - 10 = 25x$

    $x = \dfrac{6y - 10}{25}$

13. $y = 7x + 2$

    $y - 2 = 7x$

    $x = \dfrac{y - 2}{7}$

14. $4y + 3x = 5$

    $3x = 5 - 4y$

    $x = \dfrac{5 - 4y}{3}$

15. $y = \sqrt{x + 5}$

    $y^2 = x + 5$

    $x = y^2 - 5$

16. $y = (x + 2)^2$

    $\pm\sqrt{y} = x + 2$

    $x = \pm\sqrt{y} - 2$

Solve:

17. $\dfrac{-k}{7} = 5$

    $k = -35$

18. $\dfrac{-2}{x} = 5$

    $-2 = 5x$

    $x = {}^{-2}/_{5}$

19. $2x - 5 = \dfrac{x + 2}{5}$

    $10x - 25 = x + 2$

    $x = {}^{27}/_{9} = 3$

20. $\dfrac{2x + 2}{3} = 4x + 3$

    $2x + 2 = 12x + 9$

    $-7 = 10x$

    $x = {}^{-7}/_{10}$

21. $\dfrac{x}{3} > \dfrac{2x + 4}{7}$

    $7x > 6x + 12$

    $x > 12$

22. $\dfrac{2x}{5} + 7 = x - 5$

    $2x + 35 = 5x - 25$

    $60 = 3x$

    $x = 20$

23. $\dfrac{4x + 3}{6} > x - 2$

    $4x + 3 > 6x - 12$

    $15 > 2x$

    $x < {}^{15}/_{2}$

24. $\dfrac{x}{10} + \dfrac{7}{5} = 1$

    $x/10 + 14/10 = 10/10$

    $x + 14 = 10$

    $x = -4$