

Class/Homework

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- 12.** Two rental halls are considered for a wedding.
- Hall A costs \$50 per person.
- Hall B costs \$2000, plus \$40 per person.
- Determine the number of people for which the halls will cost the same to rent.
- Model this problem with an equation.
 - Solve the problem.
 - Verify the solution.

- 13.** Five subtract 3 times a number is equal to 3.5 times the same number, subtract 8.
- Write, then solve an equation to determine the number. Verify the solution.

15) Verify each student's work.

If the solution is incorrect, write a correct and complete solution.

a) Student A:

$$\begin{aligned}2.2x &= 7.6x + 27 \\2.2x - 7.6x &= 7.6x + 27 - 7.6x \\-5.4x &= 27 \\ \frac{-5.4x}{-5.4} &= \frac{27}{-5.4} \\x &= 5\end{aligned}$$

$$\underline{2.2x = 7.6x + 27}$$

15) Verify each student's work.

If the solution is incorrect, write a correct and complete solution.

b) Student B:

$$\begin{aligned} -2.3x - 2.7 &= 2.2x + 11.7 \\ -2.3x - 2.7 + 2.2x &= 2.2x + 11.7 + 2.2x \\ -0.1x - 2.7 &= 11.7 \\ -0.1x - 2.7 + 2.7 &= 11.7 + 2.7 \\ -0.1x &= 14.4 \\ \frac{-0.1x}{-0.1} &= \frac{14.4}{-0.1} \\ x &= -144 \end{aligned}$$

$$\underline{-2.3x - 2.7 = 2.2x + 11.7}$$

16. a) Solve each pair of equations.

i) $\frac{x}{27} = 3$ $\frac{27}{x} = 3$

ii) $\frac{a}{36} = 12$ $\frac{36}{a} = 12$

17. Solve each equation. Verify the solution.

a) $4(g + 5) = 5(g - 3)$

b) $3(4j + 5) = 2(-10 + 5j)$

c) $2.2(h - 5.3) = 0.2(-32.9 + h)$

d) $0.04(5 - s) = 0.05(6 - s)$

19. Solve each equation.

$$\text{a) } \frac{7}{2}(m + 12) = \frac{5}{2}(20 + m)$$

$$\text{b) } \frac{1}{3}(5 - 3t) = \frac{5}{6}(t - 2)$$

$$\text{c) } \frac{3}{2}(1 + 3r) = \frac{2}{3}(2 - 3r)$$

$$\text{d) } \frac{2}{3}(6x + 5) = \frac{4}{5}(20x - 7)$$

21. Solve each equation. Verify the solution.

a) $\frac{x}{4} + \frac{7}{4} = \frac{5}{6}$

b) $\frac{5x}{16} - \frac{5}{4} = \frac{x}{4}$

c) $2 - \frac{x}{24} = \frac{5x}{24} + 1$

d) $\frac{25}{9} + \frac{x}{9} = \frac{7x}{6} - \frac{5}{2}$