

Algebra 1

Practice Quiz 2.1-2.4

NAME KEY

Translate each sentence into an equation. (2 Points)

1. Twice a number b decreased by 3 is 17.

$$2b - 3 = 17$$

2. The quotient of a number and 2 is -14.

$$\frac{q}{2} = -14$$

3. Six more than a number is equal to the product of two and eight.

$$n + 6 = 2 \cdot 8$$

4. Three times the sum of a number y and nine is ten times y .

$$3(y + 9) = 10y$$

Solve each equation. (2 Points)

$$\begin{array}{r|l} x + 11 & = 7 \\ -11 & -11 \\ \hline x & = -4 \end{array}$$

$$\begin{array}{r|l} 3x & = 18 \\ \hline x & = 6 \end{array}$$

$$\begin{array}{r|l} 13 & = x - 9 \\ +9 & +9 \\ \hline 22 & = x \end{array}$$

$$\begin{array}{r|l} x - 15 & = -9 \\ +15 & +15 \\ \hline x & = 6 \end{array}$$

$$\begin{array}{r|l} x + 7 & = -2 \\ -7 & -7 \\ \hline x & = -9 \end{array}$$

$$\begin{array}{r|l} 10 \cdot \frac{x}{3} & = -8 \cdot 3 \\ \hline x & = -24 \end{array}$$

$$\begin{array}{r|l} \frac{4}{3} \cdot \frac{3}{4} x & = 12 \cdot \frac{4}{3} \\ \hline x & = 16 \end{array}$$

$$\begin{array}{r|l} -4 \cdot -11 & = \frac{x}{-4} \\ \hline 44 & = x \end{array}$$

$$\begin{array}{r|l} -36 & = 6x \\ \hline -6 & = x \end{array}$$

1. _____
2. _____
3. _____
4. _____
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6. _____
7. _____
8. _____
9. _____
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11. _____
12. _____
13. _____

Points(26) _____

Solve each equation. (3 Points)

$$14. \begin{array}{r|l} 7x - 4 & = 31 \\ +4 & +4 \\ \hline 7x & = 35 \\ \hline 7 & 7 \\ \hline x & = 5 \end{array}$$

$$15. \begin{array}{r|l} 9 & = 3x + 27 \\ -27 & -27 \\ \hline -18 & = 3x \\ \hline 3 & 3 \\ \hline -6 & = x \end{array}$$

$$16. \begin{array}{r|l} 4x + 11 & = -21 \\ -11 & -11 \\ \hline 4x & = -32 \\ \hline 4 & 4 \\ \hline x & = -8 \end{array}$$

$$17. \begin{array}{r|l} 13 - 2x & = 5 \\ -13 & -13 \\ \hline -2x & = -8 \\ \hline -2 & -2 \\ \hline x & = 4 \end{array}$$

$$18. \begin{array}{r|l} \frac{x}{3} - 16 & = -12 \\ +16 & +16 \\ \hline 3 \cdot \frac{x}{3} & = 4 \cdot 3 \\ \hline x & = 12 \end{array}$$

~~$$19. \begin{array}{r|l} \frac{x-2}{7} & = 4 \\ \hline x-2 & = 28 \\ \hline +2 & +2 \\ \hline x & = 30 \end{array}$$~~

$$20. \begin{array}{r|l} \frac{2}{5}x - 6 & = 4 \\ +6 & +6 \\ \hline \frac{2}{5}x & = 10 \\ \hline \frac{5}{2} \cdot \frac{2}{5}x & = \frac{5}{1} \cdot \frac{10}{2} \\ \hline x & = 25 \end{array}$$

$$21. \begin{array}{r|l} 5x + 25 & = 9x + 17 \\ -5x & -5x \\ \hline 25 & = 4x + 17 \\ -17 & -17 \\ \hline 8 & = 4x \\ \hline \frac{8}{4} & = \frac{4x}{4} \\ \hline 2 & = x \end{array}$$

$$22. \begin{array}{r|l} 7 + 2x & = 5x - 20 \\ -2x & -2x \\ \hline 7 & = 3x - 20 \\ +20 & +20 \\ \hline 27 & = 3x \\ \hline \frac{27}{3} & = \frac{3x}{3} \\ \hline 9 & = x \end{array}$$

$$23. \begin{array}{r|l} 6x + 8 & = 9x - 12 \\ -6x & -6x \\ \hline 8 & = 3x - 12 \\ +12 & +12 \\ \hline 20 & = 3x \\ \hline \frac{20}{3} & = \frac{3x}{3} \\ \hline \frac{20}{3} & = x \end{array}$$

$$24. \begin{array}{r|l} 4(2x - 1) & = 6(2x - 2) \\ 8x - 4 & = 12x - 12 \\ -8x & -8x \\ \hline -4 & = 4x - 12 \\ +12 & +12 \\ \hline 8 & = 4x \\ \hline \frac{8}{4} & = \frac{4x}{4} \\ \hline 2 & = x \end{array}$$

$$25. \left(\frac{1}{3} + \frac{5}{6}x = \frac{1}{6}x - \frac{4}{3} \right) 6$$

$$\begin{array}{r|l} 2 + 5x & = x - 8 \\ -x & -x \\ \hline 2 + 4x & = -8 \\ -2 & -2 \\ \hline 4x & = -10 \\ \hline \frac{4x}{4} & = \frac{-10}{4} \\ \hline x & = -\frac{5}{2} \end{array}$$

- 14. _____
- 15. _____
- 16. _____
- 17. _____
- 18. _____
- 19. _____
- 20. _____
- 21. _____
- 22. _____
- 23. _____
- 24. _____
- 25. _____

Points (36) _____