Linear Equation Review

Solve each linear equation. Show your work.

1 $2(x - 5) - 8 = 20$

2 $2x - (5 - x) = \dfrac{5}{2}$

3 $\dfrac{1}{4}(x + 2) - 2 = 0.5$

4 $4x - \dfrac{5 - 2x}{5} = \dfrac{3}{5}$

Write each repeating decimal as a fraction. Show your work.

5 $0.\overline{2}$

6 $0.9\overline{3}$

7 $0.2\overline{6}$

8 $0.3\overline{16}$

Tell whether each equation has one solution, no solution, or an infinite number of solutions. Show your work.

9 $2x + 4 = -2\left(\dfrac{1}{2} - x\right)$

10 $6y + (16 - 2y) = 4(4 + y)$

11 $4x + 5 = 2x - 7$

12 $2x + 5 = -4\left(-\dfrac{5}{4} - \dfrac{1}{2}x\right)$

13 $8(x + 2) = 2x + 16$

14 $3 + \dfrac{3}{2}x + 4 = 4x - \dfrac{5}{2}x$

15 $\dfrac{3}{2}(2x + 6) = 3x + 9$

16 $\dfrac{1}{2}(2 - 4x) + 2x = 13$

Find the value of y when x = 4.

17 $\frac{1}{7}(3x + y) = x$

18 $\frac{3y + 1}{4} = 2x$

Complete the table of x- and y-values for each equation.

19 $y = 5(x + 3)$

x	0	1	2
y	?	?	?

20 $\frac{x}{4} + y = 1$

x	2	?	?
y	?	0	−0.5

Don't forget to study Math Warm Up Problems from this week!