Solving Equations Worksheet

MPM1D
Jensen

Name:_____

Section 1: Solve Simple Equations:

1) $y + 7 = 12$

2) $x - 4 = 15$

3) $3x - 17 = 13$

4) $3n = -21$

5) $\frac{x}{3} = -3$

6) $\frac{x}{4} - 2 = 2$

Section 2: Solve Multi-Step Equations:

7) $5y - 12 = y - 4$

8) $5x + 6x - 2x = 3x - 18 + 12 - 6$

9) $7 + 5(x - 3) = 3(x + 2)$

10) $4m - 9 = -2m + 7$

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11) $2(a - 8) + 3(a + 6) = 17$

12) $3(2p + 1) = 5(p + 1)$

Section 3: Solving Equations with Fractions

13) $\dfrac{n}{-3} = 4$

14) $\dfrac{v + 8}{5} = 4$

15) $\dfrac{1}{3}(10 + x) = x$

16) $\dfrac{5}{6}(x - 4) = \dfrac{1}{2}(x - 2)$

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17) $\frac{1}{2}(x - 5) = 2x + 5$

18) $\frac{3x}{4} + \frac{x-5}{3} = \frac{1}{2}$

**19)** $\frac{x + 4}{3} = \frac{x + 6}{5}$

20) $\frac{3n + 2}{8} = \frac{3n - 2}{4}$

Section 4: Applications

21) In a triangle, the measure of the middle angle is triple the measure of the smallest angle, and the measure of the largest angle is 55° greater than the measure of the smallest angle. Find the measures of the angles. (Remember the sum of the angles in a triangle is 180 degrees)

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22) A square and a rectangle have the same perimeter. Find the side lengths of each figure.

$x + 1$ $2x - 3$ $x - 1$
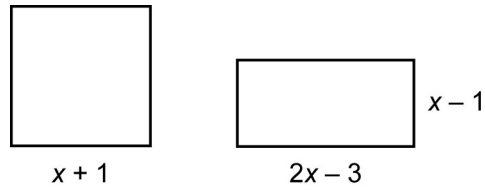
23) A backyard has a perimeter of 144m.

    a) If the backyard is square, what are the dimensions?

    b) If the backyard is rectangular, and the length is three times the width, what are the dimensions?

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Answers

1) 5
2) 19
3) 10
4) -7
5) -9
6) 16
7) 2
8) -2
9) 7
10) 8/3
11) 3
12) 2
13) -12
14) 12
15) 5
16) 7
17) -5
18) 2
19) -1
20) 2
21) 25,75,80
22) x=6, square is 7x7, rectangle is 9x5
23) a) 36   b) 18 by 54