Name: _____ **Date:** _____

Math 9 Solving Equations Worksheet — Mrs. van der Vossen

Multiple Choice

Identify the choice that best completes the statement or answers the question. 1 mark each.

1. A rectangle has a width of $r + 3$ cm and a length of $2r + 9$ cm. The perimeter of the rectangle is
   a. 6 cm
   b. 12 cm
   c. $r + 6$ cm
   d. $6(r + 4)$ cm
2. Solve $0.8\,p = 3.6$.
   a. $p = 0.22$
   b. $p = 0.45$
   c. $p = 2.88$
   d. $p = 4.5$
3. What is the value of t if $1.3\,t = 3.25$?
   a. $t = 0.25$
   b. $t = 0.4$
   c. $t = 2.5$
   d. $t = 4.225$
4. Solve $4\,f = 11$.
   a. $f = 0.28$
   b. $f = 0.36$
   c. $f = 2.5$
   d. $f = 2.75$
5. What is the value of m if $\frac{3\,m}{5} = 3.5$?
   a. $m = 2.1$
   b. $m = 5.83$
   c. $m = 7.75$
   d. $m = 9.5$
6. Solve $\frac{6\,g}{7} = 2.4$.
   a. $g = 0.86$
   b. $g = 2.8$
   c. $g = 14.4$
   d. $g = 16.8$
7. What is the value of d if $\frac{6.3}{7} = 3\,d$?
   a. $d = 0.3$
   b. $d = 3.33$
   c. $d = 18.9$
   d. $d = 21$
8. Solve $\frac{10.85}{a} = 3.5$.
   a. $a = 0.31$
   b. $a = 0.323$
   c. $a = 3.1$
   d. $a = 37.975$
9. What is the value of h if $\frac{9.49}{h} = 14.6$?
   a. $h = 0.65$
   b. $h = 1.538$
   c. $h = 6.1685$
   d. $h = 138.554$
10. Solve $\frac{34.83}{3r} = 2.7$.
    a. $r = 4.3$
    b. $r = 8.1$
    c. $r = 34.53$
    d. $r = 94.041$
11. Solve the following: $5s + 4 = 22$.
    a. $s = 2.4$
    b. $s = 3.6$
    c. $s = 18$
    d. $s = 22$
12. What is the value of q if $2.7\,q - 5 = 6.07$?
    a. $q = 0.396$
    b. $q = 2.862$
    c. $q = 4.100$
    d. $q = 11.240$
13. Solve the following: $12 - 1.7\,v = 4.15$.
    a. $v = -16.15$
    b. $v = 2.89$
    c. $v = 4.62$
    d. $v = 9.5$
14. Solve $7.2\,b + 6.4 = 43.12$.
    a. $b = 5.1$
    b. $b = 6.88$
    c. $b = 13.6$
    d. $b = 29.52$

15. Solve the following: $\frac{3.2\,a}{4} + 6.2 = 7.32$.

a. $a = 0.8$
b. $a = 1.12$
c. $a = 1.4$
d. $a = 1.92$

16. Solve $\frac{5.7\,c}{2.3} - 4.2 = 33.819$.

a. $c = 0.652$
b. $c = 2.48$
c. $c = 15.341$
d. $c = 38.019$

17. Solve $6.4 + \frac{7\,d}{2.5} = 14.88$.

a. $d = 2.8$
b. $d = 3.0$
c. $d = 9.2$
d. $d = 21.28$

18. Solve the following: $3(2x + 3) = 12$.

a. $x = 0.5$
b. $x = 1.5$
c. $x = 2.0$
d. $x = 3.5$

19. Solve $4.6(2.5a - 2) = 6.9$.

a. $a = 1.4$
b. $a = 2.76$
c. $a = 23.0$
d. $a = 3.56$

20. Solve $2.1\left(\frac{6k}{3} - 4.7\right) = 8.19$.

a. $k = 4.3$
b. $k = 8.19$
c. $k = 9.87$
d. $k = 18.06$

21. What is the value of h if $6.3\left(\frac{5.1h}{4.2} + 2.7\right) = 38.43$?

a. $h = 2.3$
b. $h = 2.8$
c. $h = 17.01$
d. $h = 21.42$

22. Solve $5(2.6p + 3.9) = 5$.

a. $p = -1.1$
b. $p = -3.9$
c. $p = -7.8$
d. $p = -13$

23. Solve $5\left(\frac{4z}{3} + 3\right) = 11$.

a. $z = -0.5$
b. $z = -0.6$
c. $z = -1.5$
d. $z = -1.6$

24. Solve $4x = 3 + 2x$.

a. $x = 1.5$
b. $x = 2$
c. $x = 3$
d. $x = 6$

25. What is the value of x if $5x = 15 + 2x$?

a. $x = 2.14$
b. $x = 2.5$
c. $x = 3$
d. $x = 5$

26. Solve $2.3t = 5t - 9.99$.

a. $t = -1.37$
b. $t = 1.37$
c. $t = 3.7$
d. $t = 4.34$

27. Solve for w in $\frac{2w}{3} = 12 + \frac{2w}{7}$.

a. $w = 3$
b. $w = 4.5$
c. $w = 31.5$
d. $w = 252$

28. Solve the following: $4q = 3(0.55 + \frac{3q}{5})$.

a. $q = 0.28$
b. $q = 0.75$
c. $q = 1.65$
d. $q = 8.25$

29. Solve $5z + 3 = 2z + 6$.

a. $z = 0.43$
b. $z = 1.00$
c. $z = 1.29$
d. $z = 3.00$

30. What is $8t - 2 = 5t + 7$?

a. $t = 0.69$
b. $t = 1.67$
c. $t = 2$
d. $t = 3$

31. Solve $4.8s - 7.6 = 1.2s + 15.8$.
   a. $s = 1.37$
   b. $s = 2.28$
   c. $s = 3.9$
   d. $s = 6.5$

32. What is $5.1d + 2.7 = 3.9d - 2.7$?
   a. $d = 0$
   b. $d = 0.675$
   c. $d = 2.25$
   d. $d = 4.5$

33. Solve the following: $\frac{3}{4}x - 3.2 = 5.3 - \frac{2x}{3}$.
   a. $x = 6$
   b. $x = 8.5$
   c. $x = 17$
   d. $x = 102$

34. Solve $\frac{4}{5}w + 4.8 = 13.2 - \frac{1}{4}w$.
   a. $w = 8$
   b. $w = 8.4$
   c. $w = 16$
   d. $w = 18$

35. What is $3.2e - 5.76 = 11.52 - 1.6e$?
   a. $e = 1.2$
   b. $e = 1.8$
   c. $e = 3.6$
   d. $e = 4.8$

36. What is $3(5x + 3) = 2(3x + 18)$?
   a. $x = 3$
   b. $x = 5$
   c. $x = 9$
   d. $x = 27$

37. Solve the following: $20x = 24 + 14x$.
   a. $x = 4$
   b. $x = 6$
   c. $x = 14$
   d. $x = 24$

38. Solve $4(6x - 2) = 2(\frac{3x}{4} + 5)$.
   a. $x = 0.2$
   b. $x = 0.8$
   c. $x = 5$
   d. $x = 18$

39. What is $6(\frac{5m}{6} - 5) = 5(6 - 5m)$?
   a. $m = 1$
   b. $m = 2$
   c. $m = 10$
   d. $m = 12$

40. Solve $4.2(1.75a - 3.2) = 3.9(1.5a + 4.6)$.
   a. $a = 2.51$
   b. $a = 13.35$
   c. $a = 20.92$
   d. $a = 31.38$

41. Marc had 5 coupons for \$2.50 off the regular admission price of a movie. He bought tickets for himself and 4 friends. He paid \$42.25. The regular price for each ticket was
   a. \$8.45
   b. \$10.69
   c. \$10.95
   d. \$12.50

42. Julie puts 62 blue buttons in a bag. This number is 12 more than half the number of red buttons. The number of yellow buttons is one quarter the number of red buttons. How many yellow buttons are there in the tin?
   a. 15
   b. 25
   c. 50
   d. 100

43. Pat buys 3 cans of pop per week. This is 2 more than one fifth the number of cans of juice Pat buys per week. The number of cans of juice Pat buys per week is:
   a. 2
   b. 5
   c. 8
   d. 15

44. An apple has 5 mg of vitamin C. A banana has 2 mg more than twice the amount of vitamin C of an apple. If an orange has 3.5 times as much vitamin C as a banana, how much vitamin C does an orange have?
   a. 7 mg
   b. 12 mg
   c. 24.5 mg
   d. 42 mg

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Mrs. van der Vossen

Answer Section

MULTIPLE CHOICE

1.	ANS: D	OBJ: Section 8.3
2.	ANS: D	OBJ: Section 8.1
3.	ANS: C	OBJ: Section 8.1
4.	ANS: D	OBJ: Section 8.1
5.	ANS: B	OBJ: Section 8.1
6.	ANS: B	OBJ: Section 8.1
7.	ANS: A	OBJ: Section 8.1
8.	ANS: C	OBJ: Section 8.1
9.	ANS: A	OBJ: Section 8.1
10.	ANS: A	OBJ: Section 8.1
11.	ANS: B	OBJ: Section 8.2
12.	ANS: C	OBJ: Section 8.2
13.	ANS: C	OBJ: Section 8.2
14.	ANS: A	OBJ: Section 8.2
15.	ANS: C	OBJ: Section 8.2
16.	ANS: C	OBJ: Section 8.2
17.	ANS: B	OBJ: Section 8.2
18.	ANS: A	OBJ: Section 8.3
19.	ANS: A	OBJ: Section 8.3
20.	ANS: A	OBJ: Section 8.3
21.	ANS: B	OBJ: Section 8.3
22.	ANS: A	OBJ: Section 8.3
23.	ANS: B	OBJ: Section 8.3
24.	ANS: A	OBJ: Section 8.4
25.	ANS: D	OBJ: Section 8.4
26.	ANS: C	OBJ: Section 8.4
27.	ANS: C	OBJ: Section 8.4
28.	ANS: B	OBJ: Section 8.4
29.	ANS: B	OBJ: Section 8.4
30.	ANS: D	OBJ: Section 8.4
31.	ANS: D	OBJ: Section 8.4
32.	ANS: D	OBJ: Section 8.4
33.	ANS: A	OBJ: Section 8.4
34.	ANS: A	OBJ: Section 8.4
35.	ANS: C	OBJ: Section 8.4
36.	ANS: A	OBJ: Section 8.4
37.	ANS: A	OBJ: Section 8.4
38.	ANS: B	OBJ: Section 8.4
39.	ANS: B	OBJ: Section 8.4

40. ANS: C OBJ: Section 8.4
41. ANS: C OBJ: Section 8.3
42. ANS: B OBJ: Section 8.4
43. ANS: B OBJ: Section 8.4
44. ANS: D OBJ: Section 8.4