Name: Key

Teacher:

Score:

Date:

Review of Operations, Expressions and Solving Equations

PEMDAS

Order of Operations

1. $8 \times 3 \div 6 \times 2 - 7$

$24 \div 6 \times 2 - 7$

$4 \times 2 - 7$

$8 - 7 = 1$

2. $18 + 11 - 8 \times 9 \div 4$

$18 + 11 - 18$

$29 - 18$

11

3. $4 \times (15 - (28 \div 7)) - 9$

$4 \cdot (15 - 4) - 9$

$4 \cdot 11 - 9$

$44 - 9$

35

4. $((2 \times 7) - (54 \div 9)) \times 6$

$(14 - 6)$

$8 \cdot 6$

48

5. $((15 + 12) - (9 \times 3)) \times 5$

$(27 - 27)$

$0 \cdot 5$

0

6. $(6 \times 8) + ((108+36) \div 3)$

$48 + (144 \div 3)$

$48 + 48 = 96$

7. $3 \times (13 \times 5 + 7^2) - 16 \times 4$

$3 \times (13 \times 5 + 49) - 16 \times 4$

$65 + 49$

$3 \cdot 114 - 16 \cdot 4$

$342 - 64$

278

8. $(33-19) \times (60 \div 15) + 5^2$ 25

$14 \times 4 + 25$

$56 + 25$

81

9. $((5+1)^2 - (72 \div 3)) \times 17$

$6^2 - 24$

$36 - 24$

$12 \cdot 17$

204

10. $9 + (4 \times (17-6)^2) - 84$

$(4 \cdot 11^2)$

$(4 \cdot 121)$

$9 + 484 - 84$

$493 - 84$

409

Simplify and Evaluate Expressions

11. $-46 + 82c + 101 - 375c$

$55 + 82c - 375c$

$55 - 293c$

12. $12x - 40 - 37x$

$-25x - 40$

13. $99 - (52y - 8)$

$99 - 52y - 8$

$107 - 52y$

14. $6(13 - 9n) - 5(7n - 5)$

$78 - 54n - 35n + 25$

$78 - 89n + 25$

$103 - 89n$

78
25
103

15. $-3(8b + 12 - b) - 10(4 - 5b)$

$-24b - 36 + 3b - 40 + 50b$

$29b - 76$

16. $w \div 3 + x \times 5y$ use $w = 33$, $y = 4$, $x = -2$

$33 \div 3 + (-2) \cdot 5(4)$

$11 + -2 \cdot 5(4)$

$11 + -10(4)$

$11 - 40 = -29$

17. $a - b^2$ use $a = 14$, $b = 7$

$14 - 7^2$

$14 - 49$

-35

18. $c^3(d + m \div 2)$ use $c = 3$, $d = 18$, $m = 4$

$3^3(18 + 4 \div 2)$

$27(18 + 2)$

$27 \cdot 20 = 540$

19. $pq^2 \div 3$ use $p = 2$, $q = 9$

$2 \cdot 9^2 \div 3$

$2 \cdot 81 \div 3$

$162 \div 3$

54

20. $2d - f + ef \div 4$ use $d = 5$, $f = 3$, $e = 16$

$2(5) - 3 + 16(3)$

$10 - 3 + 48$

$7 + 48 = 55$

21. $(h - k)^2 + (2h - 5)$ use $h = 13$, $k = 8$

$(13 - 8)^2 + (2(13) - 5)$

$5^2 + (26 - 5)$

$25 + 21 = 46$

22. $w(8v + 3y)$ use $v = -1$, $w = 6$, $y = 6$

$6(8(-1) + 3(6))$

$6(-8 + 18)$

$6 \cdot 10 = 60$

23. $f(g^2 - 3f)$ use $f = 20$, $g = 19$

$20(19^2 - 3(20)$

$20(361 - 3(20)$

$20(361 - 60) = 20(301) = 6020$

24. $5 + 2(7j - k) + m \div 2$ use $m = 6$, $k = 5$, $j = -1$

$5 + 2(7(-1) - 5) + 6 \div 2$

$5 + 2(-7 - 5) + 6 \div 2$

$5 + 2(-12) + 6 \div 2$

$5 - 24 + 3 = -16$

25. $(5a^2 + b) \div 2 - a + 4$ use $a = -4$, $b = 12$

$(5 \cdot (-4)^2 + (12)) \div 2 - -4 + 4$

$(5 \cdot 16 + 12) \div 2 + 4 + 4$

$(80 + 12) \div 2 + 4 + 4$

$92 \div 2 + 4 + 4$

$46 + 4 + 4$

54

Solve Equations

26. $z + 7 = 13$

$\cancel{+7} \quad -7$

$z = 6$

27. $4 = 19 + a$

$-19 \quad -19$

$-15 = a$

28. $-71 + r = 36$

$+71 \quad +71$

$r = 107$

29. $s - 52 = 25$

$+52 \quad +52$

$s = 77$

30. $-6b = -54$

-6

$b = 9$

31. $210r = -8400$

210

$r = -40$

32. $c \div 7 = 3$

$\cdot 7 \quad \cdot 7$

$c = 21$

$\frac{c}{7} = \frac{3}{1} \cdot \frac{7}{1}$

33. $u \div (-9) = 40$

$\cdot -9 \quad \cdot -9$

$u = -360$

$\frac{u}{-9} = \frac{40}{1} \rightarrow u = -360$

34. $\frac{x}{4} + 4 = -10$

$-4 \quad -4$

$\frac{4}{1} \cdot \frac{x}{4} = -\frac{14}{1} \cdot \frac{4}{1}$

$x = -56$

35. $\frac{1}{3}x - 10 = 20$

$+10 \quad +10$

$\frac{3}{1} \cdot \frac{1}{3}x = \frac{30}{1} \cdot \frac{3}{1}$

$x = 90$

$\frac{3}{1} \cdot \frac{1}{3}x = \frac{30}{1} \cdot \frac{3}{1}$