

Simplifying and Solving Equations (A)

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $2(3 - h) - 6 = -5h$

11. $2(3x - 2) + 9 = -5x$

2. $7 + 9d = 7d + 3$

12. $3(1 + p) = -5(p + 1)$

3. $-2(4 + 3y) = -2(4 + y)$

13. $3(1 - 3g) = -7 + g$

4. $-7 + 4c = 7c + 6$

14. $1 + 2b = 4b + 9$

5. $5(1 + s) = -9s + 6$

15. $2z + 6 = 3z + 1$

6. $3 + v = 2(2v - 1)$

16. $5a - 2 = -9a + 8$

7. $-2 - 4w = 7w - 8$

17. $6t - 5 = -9t - 9$

8. $-6(1 - m) = 9 - 2m$

18. $-1 + 3f = -7 - 6f$

9. $-2q - 3 = -2(2q + 1)$

19. $2 + r = 7 + 6r$

10. $6n + 7 = 2n + 5$

20. $-6k + 1 = -2 + 7k$

Simplifying and Solving Equations (A) Answers

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $2(3 - h) - 6 = -5h$

$h = 0$

2. $7 + 9d = 7d + 3$

$d = -2$

3. $-2(4 + 3y) = -2(4 + y)$

$y = 0$

4. $-7 + 4c = 7c + 6$

$c = -4\frac{1}{3}$

5. $5(1 + s) = -9s + 6$

$s = \frac{1}{14}$

6. $3 + v = 2(2v - 1)$

$v = 1\frac{2}{3}$

7. $-2 - 4w = 7w - 8$

$w = \frac{6}{11}$

8. $-6(1 - m) = 9 - 2m$

$m = 1\frac{7}{8}$

9. $-2q - 3 = -2(2q + 1)$

$q = \frac{1}{2}$

10. $6n + 7 = 2n + 5$

$n = -\frac{1}{2}$

11. $2(3x - 2) + 9 = -5x$

$x = -\frac{5}{11}$

12. $3(1 + p) = -5(p + 1)$

$p = -1$

13. $3(1 - 3g) = -7 + g$

$g = 1$

14. $1 + 2b = 4b + 9$

$b = -4$

15. $2z + 6 = 3z + 1$

$z = 5$

16. $5a - 2 = -9a + 8$

$a = \frac{5}{7}$

17. $6t - 5 = -9t - 9$

$t = -\frac{4}{15}$

18. $-1 + 3f = -7 - 6f$

$f = -\frac{2}{3}$

19. $2 + r = 7 + 6r$

$r = -1$

20. $-6k + 1 = -2 + 7k$

$k = \frac{3}{13}$

Simplifying and Solving Equations (B)

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-8c + 8 = 5c + 2$

11. $-3 + 8t = -1 + 5t$

2. $6 - 7w = -w + 6$

12. $-2(1 + h) = -7(h + 1)$

3. $-2 + 6d = 4d + 8$

13. $-6p = -2(4 - p) - 7$

4. $-6g - 5 = -5g + 6$

14. $-2(2 + 3x) = -3(2 - 3x)$

5. $-4(a + 2) - 1 = -5a$

15. $-8 - m = 7 - 6m$

6. $8b + 5 = -1 + 6b$

16. $-9 - 6y = 2 + 2y$

7. $-6j + 6 = j + 3$

17. $-4(2r + 1) = -6 + r$

8. $2(f + 2) = 5 - 3f$

18. $-5 - k = -8 - 5k$

9. $1 + 5n = n + 8$

19. $9s - 7 = -4s + 7$

10. $-3(z + 2) = -9z + 1$

20. $2(q - 3) - 8 = -q$

Simplifying and Solving Equations (B) Answers

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-8c + 8 = 5c + 2$

$$c = \frac{6}{13}$$

11. $-3 + 8t = -1 + 5t$

$$t = \frac{2}{3}$$

2. $6 - 7w = -w + 6$

$$w = 0$$

12. $-2(1 + h) = -7(h + 1)$

$$h = -1$$

3. $-2 + 6d = 4d + 8$

$$d = 5$$

13. $-6p = -2(4 - p) - 7$

$$p = 1\frac{7}{8}$$

4. $-6g - 5 = -5g + 6$

$$g = -11$$

14. $-2(2 + 3x) = -3(2 - 3x)$

$$x = \frac{2}{15}$$

5. $-4(a + 2) - 1 = -5a$

$$a = 9$$

15. $-8 - m = 7 - 6m$

$$m = 3$$

6. $8b + 5 = -1 + 6b$

$$b = -3$$

16. $-9 - 6y = 2 + 2y$

$$y = -1\frac{3}{8}$$

7. $-6j + 6 = j + 3$

$$j = \frac{3}{7}$$

17. $-4(2r + 1) = -6 + r$

$$r = \frac{2}{9}$$

8. $2(f + 2) = 5 - 3f$

$$f = \frac{1}{5}$$

18. $-5 - k = -8 - 5k$

$$k = -\frac{3}{4}$$

9. $1 + 5n = n + 8$

$$n = 1\frac{3}{4}$$

19. $9s - 7 = -4s + 7$

$$s = 1\frac{1}{13}$$

10. $-3(z + 2) = -9z + 1$

$$z = 1\frac{1}{6}$$

20. $2(q - 3) - 8 = -q$

$$q = 4\frac{2}{3}$$

Simplifying and Solving Equations (C)

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $8(b + 1) = -3(2 + b)$

11. $9 + 4t = -3(1 - 2t)$

2. $-3z - 1 = 1 - 7z$

12. $-2(n + 4) - 2 = 9n$

3. $w - 5 = 8w + 5$

13. $-8 + 6m = -6m + 8$

4. $-5f - 8 = 2(3f + 2)$

14. $6x - 6 = 9x - 3$

5. $6g + 5 = -2(1 + 2g)$

15. $-9j - 1 = 9j - 5$

6. $5r = -3(r + 3) - 7$

16. $5s + 3 = -s - 4$

7. $-7q + 8 = -8 + 3q$

17. $-h = -3(3h + 1) + 1$

8. $-4p - 2 = 6p + 1$

18. $-6(1 - v) = 5(1 - v)$

9. $-5 + 8a = -4 + 7a$

19. $-7 - 5d = 7 - 9d$

10. $5k = -2(1 + 4k) - 7$

20. $-6y = -5(1 - y) - 5$

Simplifying and Solving Equations (C) Answers

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $8(b + 1) = -3(2 + b)$

$$b = -1\frac{3}{11}$$

11. $9 + 4t = -3(1 - 2t)$

$$t = 6$$

2. $-3z - 1 = 1 - 7z$

$$z = \frac{1}{2}$$

12. $-2(n + 4) - 2 = 9n$

$$n = -\frac{10}{11}$$

3. $w - 5 = 8w + 5$

$$w = -1\frac{3}{7}$$

13. $-8 + 6m = -6m + 8$

$$m = 1\frac{1}{3}$$

4. $-5f - 8 = 2(3f + 2)$

$$f = -1\frac{1}{11}$$

14. $6x - 6 = 9x - 3$

$$x = -1$$

5. $6g + 5 = -2(1 + 2g)$

$$g = -\frac{7}{10}$$

15. $-9j - 1 = 9j - 5$

$$j = \frac{2}{9}$$

6. $5r = -3(r + 3) - 7$

$$r = -2$$

16. $5s + 3 = -s - 4$

$$s = -1\frac{1}{6}$$

7. $-7q + 8 = -8 + 3q$

$$q = 1\frac{3}{5}$$

17. $-h = -3(3h + 1) + 1$

$$h = -\frac{1}{4}$$

8. $-4p - 2 = 6p + 1$

$$p = -\frac{3}{10}$$

18. $-6(1 - v) = 5(1 - v)$

$$v = 1$$

9. $-5 + 8a = -4 + 7a$

$$a = 1$$

19. $-7 - 5d = 7 - 9d$

$$d = 3\frac{1}{2}$$

10. $5k = -2(1 + 4k) - 7$

$$k = -\frac{9}{13}$$

20. $-6y = -5(1 - y) - 5$

$$y = \frac{10}{11}$$

Simplifying and Solving Equations (D)

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-2(3 + t) - 8 = 5t$

11. $-4 - h = h - 9$

2. $7y - 2 = -4y + 7$

12. $-5 + 3z = -6z + 7$

3. $4a - 1 = -9a + 8$

13. $3(1 + p) - 2 = -p$

4. $1 + m = 4 - 4m$

14. $-8d - 9 = 2 + 3d$

5. $-4s + 5 = 5 + 8s$

15. $-3 - 2v = -5 + 9v$

6. $2f - 8 = -5 - 9f$

16. $4 - g = 2 + 9g$

7. $1 - 8j = -9 - 3j$

17. $2k - 3 = 7 - 3k$

8. $5q = 3(1 + 2q) - 4$

18. $8 + 9x = 7(x - 1)$

9. $-4r - 3 = 4 + 9r$

19. $1 + n = 9n - 1$

10. $7 + 3b = 5b + 8$

20. $c + 3 = -7 - 8c$

Simplifying and Solving Equations (D) Answers

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-2(3 + t) - 8 = 5t$

$t = -2$

2. $7y - 2 = -4y + 7$

$y = \frac{9}{11}$

3. $4a - 1 = -9a + 8$

$a = \frac{9}{13}$

4. $1 + m = 4 - 4m$

$m = \frac{3}{5}$

5. $-4s + 5 = 5 + 8s$

$s = 0$

6. $2f - 8 = -5 - 9f$

$f = \frac{3}{11}$

7. $1 - 8j = -9 - 3j$

$j = 2$

8. $5q = 3(1 + 2q) - 4$

$q = 1$

9. $-4r - 3 = 4 + 9r$

$r = -\frac{7}{13}$

10. $7 + 3b = 5b + 8$

$b = -\frac{1}{2}$

11. $-4 - h = h - 9$

$h = 2\frac{1}{2}$

12. $-5 + 3z = -6z + 7$

$z = 1\frac{1}{3}$

13. $3(1 + p) - 2 = -p$

$p = -\frac{1}{4}$

14. $-8d - 9 = 2 + 3d$

$d = -1$

15. $-3 - 2v = -5 + 9v$

$v = \frac{2}{11}$

16. $4 - g = 2 + 9g$

$g = \frac{1}{5}$

17. $2k - 3 = 7 - 3k$

$k = 2$

18. $8 + 9x = 7(x - 1)$

$x = -7\frac{1}{2}$

19. $1 + n = 9n - 1$

$n = \frac{1}{4}$

20. $c + 3 = -7 - 8c$

$c = -1\frac{1}{9}$

Simplifying and Solving Equations (E)

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-4 - 9p = 7p + 6$

11. $7n - 2 = -7n - 8$

2. $3w + 4 = 8w + 1$

12. $9 - 7m = -1 + m$

3. $4 + 3z = 4 - 9z$

13. $1 - 8k = 5k - 8$

4. $6 + t = -9 + 2t$

14. $-7h + 1 = -4h - 8$

5. $-2(4 + 3j) - 1 = 6j$

15. $3 + 4s = 7 + 2s$

6. $-2(3f - 1) = 4f - 7$

16. $1 - 9a = -1 + 6a$

7. $-9 - 7q = 1 + 4q$

17. $1 - 5d = -7 - 3d$

8. $-8 - 8r = 4 - 2r$

18. $-9 + 7g = -g + 8$

9. $-2(1 - 3v) = -6v - 5$

19. $-3(x - 3) = 2x + 9$

10. $-4(1 + c) + 3 = -8c$

20. $-y = 4(-y + 2) + 2$

Simplifying and Solving Equations (E) Answers

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-4 - 9p = 7p + 6$

$$p = -\frac{5}{8}$$

2. $3w + 4 = 8w + 1$

$$w = \frac{3}{5}$$

3. $4 + 3z = 4 - 9z$

$$z = 0$$

4. $6 + t = -9 + 2t$

$$t = 15$$

5. $-2(4 + 3j) - 1 = 6j$

$$j = -\frac{3}{4}$$

6. $-2(3f - 1) = 4f - 7$

$$f = \frac{9}{10}$$

7. $-9 - 7q = 1 + 4q$

$$q = -\frac{10}{11}$$

8. $-8 - 8r = 4 - 2r$

$$r = -2$$

9. $-2(1 - 3v) = -6v - 5$

$$v = -\frac{1}{4}$$

10. $-4(1 + c) + 3 = -8c$

$$c = \frac{1}{4}$$

11. $7n - 2 = -7n - 8$

$$n = -\frac{3}{7}$$

12. $9 - 7m = -1 + m$

$$m = 1\frac{1}{4}$$

13. $1 - 8k = 5k - 8$

$$k = \frac{9}{13}$$

14. $-7h + 1 = -4h - 8$

$$h = 3$$

15. $3 + 4s = 7 + 2s$

$$s = 2$$

16. $1 - 9a = -1 + 6a$

$$a = \frac{2}{15}$$

17. $1 - 5d = -7 - 3d$

$$d = 4$$

18. $-9 + 7g = -g + 8$

$$g = 2\frac{1}{8}$$

19. $-3(x - 3) = 2x + 9$

$$x = 0$$

20. $-y = 4(-y + 2) + 2$

$$y = 3\frac{1}{3}$$

Simplifying and Solving Equations (F)

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $4(r - 2) = -2(4r - 3)$

11. $4 + 3(1 - g) + 5 = -9g$

2. $2(-4 - w) - 5w = 1$

12. $t + 2(t - 1) - 4 = t$

3. $9 - 2q = 6 + 9q$

13. $-3(1 + 2b) = -3 + 8b$

4. $-v - 4(v + 1) = -1 + 6v$

14. $-3(3 + 2h) = 5(h - 1) - 1$

5. $-5 + 7y = -7 - 8y$

15. $-d - 7 = 5(d + 1) + 1$

6. $-4k + 3 = 4(2k - 1)$

16. $-2(3 - j) = 7 + 3j$

7. $4(s - 2) - 1 = 2s - 3$

17. $-2(1 - 2m) = 2m + 5$

8. $-3(2a - 1) = -3(a - 1) + 2$

18. $-8z + 1 = 5(z + 1) + 2$

9. $2(-3c - 1) + 4 = -5c$

19. $7 + 3p = -1 + 6p$

10. $3(1 - n) = 6 - 2n$

20. $5x + 3 = 7 + 8x$

Simplifying and Solving Equations (F) Answers

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $4(r - 2) = -2(4r - 3)$
 $r = 1\frac{1}{6}$

11. $4 + 3(1 - g) + 5 = -9g$
 $g = -2$

2. $2(-4 - w) - 5w = 1$
 $w = -1\frac{2}{7}$

12. $t + 2(t - 1) - 4 = t$
 $t = 3$

3. $9 - 2q = 6 + 9q$
 $q = \frac{3}{11}$

13. $-3(1 + 2b) = -3 + 8b$
 $b = 0$

4. $-v - 4(v + 1) = -1 + 6v$
 $v = -\frac{3}{11}$

14. $-3(3 + 2h) = 5(h - 1) - 1$
 $h = -\frac{3}{11}$

5. $-5 + 7y = -7 - 8y$
 $y = -\frac{2}{15}$

15. $-d - 7 = 5(d + 1) + 1$
 $d = -2\frac{1}{6}$

6. $-4k + 3 = 4(2k - 1)$
 $k = \frac{7}{12}$

16. $-2(3 - j) = 7 + 3j$
 $j = -13$

7. $4(s - 2) - 1 = 2s - 3$
 $s = 3$

17. $-2(1 - 2m) = 2m + 5$
 $m = 3\frac{1}{2}$

8. $-3(2a - 1) = -3(a - 1) + 2$
 $a = -\frac{2}{3}$

18. $-8z + 1 = 5(z + 1) + 2$
 $z = -\frac{6}{13}$

9. $2(-3c - 1) + 4 = -5c$
 $c = 2$

19. $7 + 3p = -1 + 6p$
 $p = 2\frac{2}{3}$

10. $3(1 - n) = 6 - 2n$
 $n = -3$

20. $5x + 3 = 7 + 8x$
 $x = -1\frac{1}{3}$

Simplifying and Solving Equations (G)

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-7p - 3 = -8 + 5p$

11. $5 + 2g = -7g - 3$

2. $4 - 9v = 9 + v$

12. $-3(d - 3) + 2d = 1$

3. $3 = -3(1 - 2k) + 8k$

13. $-6c + 8 = -8c - 7$

4. $3 - b + 5 = -5b - 1$

14. $2 - 9w = -3w - 9$

5. $-6 + j = 3j + 4$

15. $-8 + 6f = -8f + 4$

6. $1 = -8(1 - s) + 7s$

16. $-4(2 - m) = -4m - 7$

7. $1 - 2h = -7(h - 1) + 1$

17. $q + 3 = -q + 1 - 5q$

8. $n = 3(2n - 1) + n - 1$

18. $3(-3 + 2y) = 4 + 9y$

9. $-6 + 8z = 5 - 7z$

19. $t + 5 = 5(1 + t) + 4$

10. $3(1 - 3r) = 2(4 - r)$

20. $-7 + 8a = 9(1 - a)$

Simplifying and Solving Equations (G) Answers

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-7p - 3 = -8 + 5p$

$$p = \frac{5}{12}$$

11. $5 + 2g = -7g - 3$

$$g = -\frac{8}{9}$$

2. $4 - 9v = 9 + v$

$$v = -\frac{1}{2}$$

12. $-3(d - 3) + 2d = 1$

$$d = 8$$

3. $3 = -3(1 - 2k) + 8k$

$$k = \frac{3}{7}$$

13. $-6c + 8 = -8c - 7$

$$c = -7\frac{1}{2}$$

4. $3 - b + 5 = -5b - 1$

$$b = -2\frac{1}{4}$$

14. $2 - 9w = -3w - 9$

$$w = 1\frac{5}{6}$$

5. $-6 + j = 3j + 4$

$$j = -5$$

15. $-8 + 6f = -8f + 4$

$$f = \frac{6}{7}$$

6. $1 = -8(1 - s) + 7s$

$$s = \frac{3}{5}$$

16. $-4(2 - m) = -4m - 7$

$$m = \frac{1}{8}$$

7. $1 - 2h = -7(h - 1) + 1$

$$h = 1\frac{2}{5}$$

17. $q + 3 = -q + 1 - 5q$

$$q = -\frac{2}{7}$$

8. $n = 3(2n - 1) + n - 1$

$$n = \frac{2}{3}$$

18. $3(-3 + 2y) = 4 + 9y$

$$y = -4\frac{1}{3}$$

9. $-6 + 8z = 5 - 7z$

$$z = \frac{11}{15}$$

19. $t + 5 = 5(1 + t) + 4$

$$t = -1$$

10. $3(1 - 3r) = 2(4 - r)$

$$r = -\frac{5}{7}$$

20. $-7 + 8a = 9(1 - a)$

$$a = \frac{16}{17}$$

Simplifying and Solving Equations (H)

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-7 - 6t = -4 + t$

11. $-2(g - 3) + 1 = -7g - 4$

2. $2x - 1 = 8 - 7x$

12. $-2(1 - 4q) = -7q - 5$

3. $v - 6 = -5(v + 1) - 3v$

13. $-3(1 + m) + m = 2m - 3$

4. $8(h + 1) + h = 4h + 5$

14. $-9a + 3 = 9a - 9$

5. $2(f + 3) + 1 = -4f - 7$

15. $-4(1 - w) + 3w = -3w + 2$

6. $-b + 3 = -2b - 7$

16. $4(1 - r) + 9 = 4r$

7. $-1 + 3s = 4 - 2s$

17. $-2(2 + k) = -5 - 3k$

8. $-5 + 6c = -4c - 8$

18. $2(3p + 2) = 2p + 9$

9. $-1 - y = -4 + y$

19. $3(2 - j) + 4 = -5j$

10. $5z = -5(z + 1) - z + 1$

20. $-2(d + 3) = 7d - 3$

Simplifying and Solving Equations (H) Answers

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-7 - 6t = -4 + t$

$$t = -\frac{3}{7}$$

2. $2x - 1 = 8 - 7x$

$$x = 1$$

3. $v - 6 = -5(v + 1) - 3v$

$$v = \frac{1}{9}$$

4. $8(h + 1) + h = 4h + 5$

$$h = -\frac{3}{5}$$

5. $2(f + 3) + 1 = -4f - 7$

$$f = -2\frac{1}{3}$$

6. $-b + 3 = -2b - 7$

$$b = -10$$

7. $-1 + 3s = 4 - 2s$

$$s = 1$$

8. $-5 + 6c = -4c - 8$

$$c = -\frac{3}{10}$$

9. $-1 - y = -4 + y$

$$y = 1\frac{1}{2}$$

10. $5z = -5(z + 1) - z + 1$

$$z = -\frac{4}{11}$$

11. $-2(g - 3) + 1 = -7g - 4$

$$g = -2\frac{1}{5}$$

12. $-2(1 - 4q) = -7q - 5$

$$q = -\frac{1}{5}$$

13. $-3(1 + m) + m = 2m - 3$

$$m = 0$$

14. $-9a + 3 = 9a - 9$

$$a = \frac{2}{3}$$

15. $-4(1 - w) + 3w = -3w + 2$

$$w = \frac{3}{5}$$

16. $4(1 - r) + 9 = 4r$

$$r = 1\frac{5}{8}$$

17. $-2(2 + k) = -5 - 3k$

$$k = -1$$

18. $2(3p + 2) = 2p + 9$

$$p = 1\frac{1}{4}$$

19. $3(2 - j) + 4 = -5j$

$$j = -5$$

20. $-2(d + 3) = 7d - 3$

$$d = -\frac{1}{3}$$

Simplifying and Solving Equations (I)

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-1 = -7(t + 1) - 1 + 6t$

11. $7(c - 1) - 2 = -c - 7$

2. $-7 - 6g = -5 - 4g$

12. $-1 = 5(1 + h) + 3 + 4h$

3. $5(x - 1) + x - 8 = -x$

13. $-4 + 6a = 2 - 7a$

4. $-8 = -2(1 + 4r) - r$

14. $-4(1 + 2f) - f - 6 = -f$

5. $3(1 - 3v) = 2(2 + 3v)$

15. $-7 - 3y = -5y + 8$

6. $4(1 - b) + 3 = 9 + 8b$

16. $-3 + 8q = 2(3q - 1)$

7. $-6(1 + m) = -3 - 4m$

17. $-2(1 + 4n) - n = -5n + 2$

8. $-1 + d = 7d - 1 + d$

18. $3s + 7 = -2(s - 3)$

9. $-2 + 8k = -3 + 2k$

19. $-1 + 2p = -1 - 9p$

10. $-2(3 - 4w) + 3w = 3w$

20. $6 - 4z = -6z + 7$

Simplifying and Solving Equations (I) Answers

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $-1 = -7(t + 1) - 1 + 6t$

$t = -7$

11. $7(c - 1) - 2 = -c - 7$

$c = \frac{1}{4}$

2. $-7 - 6g = -5 - 4g$

$g = -1$

12. $-1 = 5(1 + h) + 3 + 4h$

$h = -1$

3. $5(x - 1) + x - 8 = -x$

$x = 1\frac{6}{7}$

13. $-4 + 6a = 2 - 7a$

$a = \frac{6}{13}$

4. $-8 = -2(1 + 4r) - r$

$r = \frac{2}{3}$

14. $-4(1 + 2f) - f - 6 = -f$

$f = -1\frac{1}{4}$

5. $3(1 - 3v) = 2(2 + 3v)$

$v = -\frac{1}{15}$

15. $-7 - 3y = -5y + 8$

$y = 7\frac{1}{2}$

6. $4(1 - b) + 3 = 9 + 8b$

$b = -\frac{1}{6}$

16. $-3 + 8q = 2(3q - 1)$

$q = \frac{1}{2}$

7. $-6(1 + m) = -3 - 4m$

$m = -1\frac{1}{2}$

17. $-2(1 + 4n) - n = -5n + 2$

$n = -1$

8. $-1 + d = 7d - 1 + d$

$d = 0$

18. $3s + 7 = -2(s - 3)$

$s = -\frac{1}{5}$

9. $-2 + 8k = -3 + 2k$

$k = -\frac{1}{6}$

19. $-1 + 2p = -1 - 9p$

$p = 0$

10. $-2(3 - 4w) + 3w = 3w$

$w = \frac{3}{4}$

20. $6 - 4z = -6z + 7$

$z = \frac{1}{2}$

Simplifying and Solving Equations (J)

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $7 - 8w = -5w - 9$

11. $8x - 6 = 9x + 5$

2. $1 + 6g = 2(g + 2)$

12. $2(a - 3) + a = 7$

3. $2 = 3(1 - 2z) + 3z$

13. $-6 - 7t = -5 + 4t$

4. $-9 = 3(2 - v) + 2 - v$

14. $-m + 2(-1 - 2m) - m = -5$

5. $2s - 2 = -9 - 5s$

15. $8(1 - d) + d = 1$

6. $4(2 + q) + 1 = -q - 2$

16. $9j + 4 = 7j + 6$

7. $-4(r + 1) - r = 5(1 + r) + 3r$

17. $8 - 5y = -2y - 6$

8. $2(b + 2) + 1 = 6b + 1$

18. $-2k - 3 = 2(-3 - 4k)$

9. $8(1 + h) = -2(3h - 4)$

19. $-2(1 + 4p) = -p - 9$

10. $5 - c = -9c - 6$

20. $-2n - 6 = -4 - n$

Simplifying and Solving Equations (J) Answers

Name: _____

Date: _____

Determine the value of the unknown in each equation.

1. $7 - 8w = -5w - 9$

$w = 5\frac{1}{3}$

11. $8x - 6 = 9x + 5$

$x = -11$

2. $1 + 6g = 2(g + 2)$

$g = \frac{3}{4}$

12. $2(a - 3) + a = 7$

$a = 4\frac{1}{3}$

3. $2 = 3(1 - 2z) + 3z$

$z = \frac{1}{3}$

13. $-6 - 7t = -5 + 4t$

$t = -\frac{1}{11}$

4. $-9 = 3(2 - v) + 2 - v$

$v = 4\frac{1}{4}$

14. $-m + 2(-1 - 2m) - m = -5$

$m = \frac{1}{2}$

5. $2s - 2 = -9 - 5s$

$s = -1$

15. $8(1 - d) + d = 1$

$d = 1$

6. $4(2 + q) + 1 = -q - 2$

$q = -2\frac{1}{5}$

16. $9j + 4 = 7j + 6$

$j = 1$

7. $-4(r + 1) - r = 5(1 + r) + 3r$

$r = -\frac{9}{13}$

17. $8 - 5y = -2y - 6$

$y = 4\frac{2}{3}$

8. $2(b + 2) + 1 = 6b + 1$

$b = 1$

18. $-2k - 3 = 2(-3 - 4k)$

$k = -\frac{1}{2}$

9. $8(1 + h) = -2(3h - 4)$

$h = 0$

19. $-2(1 + 4p) = -p - 9$

$p = 1$

10. $5 - c = -9c - 6$

$c = -1\frac{3}{8}$

20. $-2n - 6 = -4 - n$

$n = -2$