

Unknown Symbols in Equations (A)

Name: _____

Date: _____

Determine the value of each symbol.

1. $\star = 7 + 8$

2. $9 + 4 = \blacktriangledown$

3. $3 + \clubsuit = 12$

4. $6 + 3 = \emptyset$

5. $5 + 7 = \S$

6. $\dagger = 5 + 2$

7. $3 + 1 = \oplus$

8. $\ddagger + 5 = 6$

9. $\spadesuit + 1 = 4$

10. $\otimes + 9 = 18$

11. $13 = 5 + \sphericalangle$

12. $\triangle + 4 = 10$

13. $\cup + 9 = 16$

14. $9 + 4 = \odot$

15. $7 + 2 = \blacksquare$

16. $10 = \blacklozenge + 9$

17. $\# + 3 = 10$

18. $\heartsuit = 6 + 9$

19. $12 = 8 + \diamond$

20. $\bullet = 1 + 2$

Unknown Symbols in Equations (A) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $\star = 7 + 8$

$\star = 15$

2. $9 + 4 = \blacktriangledown$

$\blacktriangledown = 13$

3. $3 + \clubsuit = 12$

$\clubsuit = 9$

4. $6 + 3 = \emptyset$

$\emptyset = 9$

5. $5 + 7 = \xi$

$\xi = 12$

6. $\dagger = 5 + 2$

$\dagger = 7$

7. $3 + 1 = \oplus$

$\oplus = 4$

8. $\natural + 5 = 6$

$\natural = 1$

9. $\spadesuit + 1 = 4$

$\spadesuit = 3$

10. $\otimes + 9 = 18$

$\otimes = 9$

11. $13 = 5 + \sphericalangle$

$\sphericalangle = 8$

12. $\triangle + 4 = 10$

$\triangle = 6$

13. $\cup + 9 = 16$

$\cup = 7$

14. $9 + 4 = \odot$

$\odot = 13$

15. $7 + 2 = \blacksquare$

$\blacksquare = 9$

16. $10 = \blacklozenge + 9$

$\blacklozenge = 1$

17. $\sharp + 3 = 10$

$\sharp = 7$

18. $\heartsuit = 6 + 9$

$\heartsuit = 15$

19. $12 = 8 + \diamond$

$\diamond = 4$

20. $\bullet = 1 + 2$

$\bullet = 3$

Unknown Symbols in Equations (B)

Name: _____

Date: _____

Determine the value of each symbol.

1. $1 + 8 = \otimes$

2. $4 + \star = 8$

3. $\natural = 9 + 4$

4. $4 = \spadesuit + 2$

5. $11 = \triangle + 6$

6. $8 + \dagger = 12$

7. $1 + 9 = \blacksquare$

8. $9 + \blacktriangledown = 12$

9. $\odot + 6 = 15$

10. $5 = 2 + \blacklozenge$

11. $12 = 3 + \emptyset$

12. $\S = 9 + 1$

13. $7 + 5 = \clubsuit$

14. $7 = \mathbb{U} + 3$

15. $\# = 5 + 7$

16. $\heartsuit + 5 = 9$

17. $\diamond = 9 + 4$

18. $2 + \sphericalangle = 6$

19. $\oplus + 8 = 13$

20. $6 = 2 + \bullet$

Unknown Symbols in Equations (B) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $1 + 8 = \otimes$

$\otimes = 9$

2. $4 + \star = 8$

$\star = 4$

3. $\natural = 9 + 4$

$\natural = 13$

4. $4 = \spadesuit + 2$

$\spadesuit = 2$

5. $11 = \triangle + 6$

$\triangle = 5$

6. $8 + \dagger = 12$

$\dagger = 4$

7. $1 + 9 = \blacksquare$

$\blacksquare = 10$

8. $9 + \blacktriangledown = 12$

$\blacktriangledown = 3$

9. $\odot + 6 = 15$

$\odot = 9$

10. $5 = 2 + \blacklozenge$

$\blacklozenge = 3$

11. $12 = 3 + \emptyset$

$\emptyset = 9$

12. $\S = 9 + 1$

$\S = 10$

13. $7 + 5 = \clubsuit$

$\clubsuit = 12$

14. $7 = \mathbb{U} + 3$

$\mathbb{U} = 4$

15. $\sharp = 5 + 7$

$\sharp = 12$

16. $\heartsuit + 5 = 9$

$\heartsuit = 4$

17. $\diamond = 9 + 4$

$\diamond = 13$

18. $2 + \sphericalangle = 6$

$\sphericalangle = 4$

19. $\oplus + 8 = 13$

$\oplus = 5$

20. $6 = 2 + \bullet$

$\bullet = 4$

Unknown Symbols in Equations (C)

Name: _____

Date: _____

Determine the value of each symbol.

1. $\heartsuit + 2 = 4$

2. $\# = 2 + 9$

3. $11 = \otimes + 5$

4. $8 + 6 = \S$

5. $6 = 3 + \dagger$

6. $16 = 8 + \odot$

7. $12 = \emptyset + 4$

8. $\blacklozenge + 3 = 11$

9. $\clubsuit = 1 + 7$

10. $6 = 2 + \blacksquare$

11. $15 = \sphericalangle + 9$

12. $7 + 1 = \oplus$

13. $18 = \wp + 9$

14. $4 + 2 = \bullet$

15. $\triangle = 3 + 5$

16. $16 = \spadesuit + 7$

17. $\star = 6 + 6$

18. $15 = \clubsuit + 8$

19. $8 + 2 = \blacktriangledown$

20. $\diamond + 3 = 4$

Unknown Symbols in Equations (C) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $\heartsuit + 2 = 4$

$\heartsuit = 2$

2. $\# = 2 + 9$

$\# = 11$

3. $11 = \otimes + 5$

$\otimes = 6$

4. $8 + 6 = \S$

$\S = 14$

5. $6 = 3 + \dagger$

$\dagger = 3$

6. $16 = 8 + \odot$

$\odot = 8$

7. $12 = \emptyset + 4$

$\emptyset = 8$

8. $\blacklozenge + 3 = 11$

$\blacklozenge = 8$

9. $\clubsuit = 1 + 7$

$\clubsuit = 8$

10. $6 = 2 + \blacksquare$

$\blacksquare = 4$

11. $15 = \sphericalangle + 9$

$\sphericalangle = 6$

12. $7 + 1 = \oplus$

$\oplus = 8$

13. $18 = \wp + 9$

$\wp = 9$

14. $4 + 2 = \bullet$

$\bullet = 6$

15. $\triangle = 3 + 5$

$\triangle = 8$

16. $16 = \spadesuit + 7$

$\spadesuit = 9$

17. $\star = 6 + 6$

$\star = 12$

18. $15 = \heartsuit + 8$

$\heartsuit = 7$

19. $8 + 2 = \blacktriangledown$

$\blacktriangledown = 10$

20. $\diamond + 3 = 4$

$\diamond = 1$

Unknown Symbols in Equations (D)

Name: _____

Date: _____

Determine the value of each symbol.

1. $6 = 1 + \diamond$

2. $\bullet + 1 = 3$

3. $10 = 7 + \dagger$

4. $\oplus = 2 + 1$

5. $16 = 9 + \blacktriangledown$

6. $15 = 7 + \ddagger$

7. $10 = 2 + \sphericalangle$

8. $14 = 7 + \star$

9. $9 = 1 + \cup$

10. $5 = \emptyset + 2$

11. $\blacklozenge = 7 + 5$

12. $\heartsuit + 1 = 10$

13. $8 + 2 = \otimes$

14. $6 + 1 = \spadesuit$

15. $\triangle = 6 + 9$

16. $4 = \odot + 3$

17. $7 + 7 = \S$

18. $8 + 6 = \ddagger$

19. $8 = \clubsuit + 1$

20. $\blacksquare = 6 + 9$

Unknown Symbols in Equations (D) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $6 = 1 + \diamond$

$\diamond = 5$

2. $\bullet + 1 = 3$

$\bullet = 2$

3. $10 = 7 + \dagger$

$\dagger = 3$

4. $\oplus = 2 + 1$

$\oplus = 3$

5. $16 = 9 + \blacktriangledown$

$\blacktriangledown = 7$

6. $15 = 7 + \mathcal{H}$

$\mathcal{H} = 8$

7. $10 = 2 + \sphericalangle$

$\sphericalangle = 8$

8. $14 = 7 + \star$

$\star = 7$

9. $9 = 1 + \mathcal{U}$

$\mathcal{U} = 8$

10. $5 = \emptyset + 2$

$\emptyset = 3$

11. $\blacklozenge = 7 + 5$

$\blacklozenge = 12$

12. $\heartsuit + 1 = 10$

$\heartsuit = 9$

13. $8 + 2 = \otimes$

$\otimes = 10$

14. $6 + 1 = \spadesuit$

$\spadesuit = 7$

15. $\triangle = 6 + 9$

$\triangle = 15$

16. $4 = \odot + 3$

$\odot = 1$

17. $7 + 7 = \S$

$\S = 14$

18. $8 + 6 = \mathcal{H}$

$\mathcal{H} = 14$

19. $8 = \clubsuit + 1$

$\clubsuit = 7$

20. $\blacksquare = 6 + 9$

$\blacksquare = 15$

Unknown Symbols in Equations (E)

Name: _____

Date: _____

Determine the value of each symbol.

1. $4 + 8 = \blacklozenge$

2. $2 + \dagger = 4$

3. $1 + 1 = \blacktriangledown$

4. $\mathbb{U} + 2 = 10$

5. $3 = 1 + \blacksquare$

6. $1 + \sphericalangle = 3$

7. $8 + \triangle = 9$

8. $1 + 7 = \bullet$

9. $\oplus = 1 + 6$

10. $\mathbb{H} = 3 + 3$

11. $\mathbb{H} + 1 = 9$

12. $9 + 3 = \emptyset$

13. $1 + \otimes = 2$

14. $\spadesuit + 1 = 4$

15. $13 = \odot + 6$

16. $11 = 2 + \star$

17. $\clubsuit + 6 = 13$

18. $\S + 8 = 11$

19. $2 + 7 = \diamond$

20. $\heartsuit = 2 + 5$

Unknown Symbols in Equations (E) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $4 + 8 = \blacklozenge$

$\blacklozenge = 12$

2. $2 + \dagger = 4$

$\dagger = 2$

3. $1 + 1 = \blacktriangledown$

$\blacktriangledown = 2$

4. $\mathbb{W} + 2 = 10$

$\mathbb{W} = 8$

5. $3 = 1 + \blacksquare$

$\blacksquare = 2$

6. $1 + \sphericalangle = 3$

$\sphericalangle = 2$

7. $8 + \triangle = 9$

$\triangle = 1$

8. $1 + 7 = \bullet$

$\bullet = 8$

9. $\oplus = 1 + 6$

$\oplus = 7$

10. $\mathbb{H} = 3 + 3$

$\mathbb{H} = 6$

11. $\mathbb{H} + 1 = 9$

$\mathbb{H} = 8$

12. $9 + 3 = \emptyset$

$\emptyset = 12$

13. $1 + \otimes = 2$

$\otimes = 1$

14. $\spadesuit + 1 = 4$

$\spadesuit = 3$

15. $13 = \odot + 6$

$\odot = 7$

16. $11 = 2 + \star$

$\star = 9$

17. $\clubsuit + 6 = 13$

$\clubsuit = 7$

18. $\S + 8 = 11$

$\S = 3$

19. $2 + 7 = \diamond$

$\diamond = 9$

20. $\heartsuit = 2 + 5$

$\heartsuit = 7$

Unknown Symbols in Equations (F)

Name: _____

Date: _____

Determine the value of each symbol.

1. $2 + \heartsuit = 4$

2. $\blacklozenge = 7 + 3$

3. $1 + 8 = \spadesuit$

4. $15 = \wp + 7$

5. $10 = \triangle + 7$

6. $5 + \blacktriangledown = 9$

7. $10 = 7 + \emptyset$

8. $16 = \sphericalangle + 7$

9. $7 + \otimes = 16$

10. $\# + 6 = 8$

11. $\odot + 1 = 5$

12. $11 = 5 + \diamond$

13. $\blacksquare = 5 + 2$

14. $13 = \S + 8$

15. $8 + \bullet = 17$

16. $5 = \star + 3$

17. $16 = 9 + \spadesuit$

18. $8 = 7 + \dagger$

19. $\oplus + 2 = 10$

20. $16 = \clubsuit + 8$

Unknown Symbols in Equations (F) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $2 + \heartsuit = 4$

$\heartsuit = 2$

2. $\blacklozenge = 7 + 3$

$\blacklozenge = 10$

3. $1 + 8 = \spadesuit$

$\spadesuit = 9$

4. $15 = \wp + 7$

$\wp = 8$

5. $10 = \triangle + 7$

$\triangle = 3$

6. $5 + \blacktriangledown = 9$

$\blacktriangledown = 4$

7. $10 = 7 + \emptyset$

$\emptyset = 3$

8. $16 = \sphericalangle + 7$

$\sphericalangle = 9$

9. $7 + \otimes = 16$

$\otimes = 9$

10. $\# + 6 = 8$

$\# = 2$

11. $\odot + 1 = 5$

$\odot = 4$

12. $11 = 5 + \diamond$

$\diamond = 6$

13. $\blacksquare = 5 + 2$

$\blacksquare = 7$

14. $13 = \S + 8$

$\S = 5$

15. $8 + \bullet = 17$

$\bullet = 9$

16. $5 = \star + 3$

$\star = 2$

17. $16 = 9 + \spadesuit$

$\spadesuit = 7$

18. $8 = 7 + \dagger$

$\dagger = 1$

19. $\oplus + 2 = 10$

$\oplus = 8$

20. $16 = \clubsuit + 8$

$\clubsuit = 8$

Unknown Symbols in Equations (G)

Name: _____

Date: _____

Determine the value of each symbol.

1. $15 = 7 + \oplus$

2. $\odot + 9 = 18$

3. $\blacksquare = 8 + 3$

4. $7 = 3 + \bullet$

5. $9 + 5 = \clubsuit$

6. $\emptyset + 4 = 7$

7. $7 + \ddagger = 11$

8. $4 + 6 = \triangle$

9. $6 + 5 = \star$

10. $1 + \natural = 4$

11. $14 = 6 + \dagger$

12. $8 = 1 + \otimes$

13. $\diamond = 7 + 7$

14. $\blacklozenge = 3 + 9$

15. $\sphericalangle + 6 = 13$

16. $5 + 5 = \S$

17. $\cup = 9 + 6$

18. $6 + \blacktriangledown = 14$

19. $2 = 1 + \heartsuit$

20. $9 + 5 = \spadesuit$

Unknown Symbols in Equations (G) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $15 = 7 + \oplus$

$\oplus = 8$

2. $\odot + 9 = 18$

$\odot = 9$

3. $\blacksquare = 8 + 3$

$\blacksquare = 11$

4. $7 = 3 + \bullet$

$\bullet = 4$

5. $9 + 5 = \clubsuit$

$\clubsuit = 14$

6. $\emptyset + 4 = 7$

$\emptyset = 3$

7. $7 + \# = 11$

$\# = 4$

8. $4 + 6 = \triangle$

$\triangle = 10$

9. $6 + 5 = \star$

$\star = 11$

10. $1 + \natural = 4$

$\natural = 3$

11. $14 = 6 + \dagger$

$\dagger = 8$

12. $8 = 1 + \otimes$

$\otimes = 7$

13. $\diamond = 7 + 7$

$\diamond = 14$

14. $\blacklozenge = 3 + 9$

$\blacklozenge = 12$

15. $\sphericalangle + 6 = 13$

$\sphericalangle = 7$

16. $5 + 5 = \S$

$\S = 10$

17. $\mathbb{U} = 9 + 6$

$\mathbb{U} = 15$

18. $6 + \blacktriangledown = 14$

$\blacktriangledown = 8$

19. $2 = 1 + \heartsuit$

$\heartsuit = 1$

20. $9 + 5 = \spadesuit$

$\spadesuit = 14$

Unknown Symbols in Equations (H)

Name: _____

Date: _____

Determine the value of each symbol.

1. $5 = 3 + \blacklozenge$

2. $6 + 8 = \bullet$

3. $8 = 3 + \otimes$

4. $6 = 2 + \emptyset$

5. $11 = \odot + 7$

6. $7 = \oplus + 6$

7. $2 + 8 = \cup$

8. $2 + \clubsuit = 11$

9. $\natural + 7 = 14$

10. $\star + 3 = 11$

11. $8 = \blacksquare + 7$

12. $4 + 8 = \sharp$

13. $6 + \diamond = 13$

14. $5 + \heartsuit = 6$

15. $\triangle = 4 + 5$

16. $15 = \sphericalangle + 7$

17. $10 = 4 + \blacktriangledown$

18. $\dagger + 4 = 10$

19. $12 = 3 + \spadesuit$

20. $10 = \S + 2$

Unknown Symbols in Equations (H) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $5 = 3 + \blacklozenge$

$\blacklozenge = 2$

2. $6 + 8 = \bullet$

$\bullet = 14$

3. $8 = 3 + \otimes$

$\otimes = 5$

4. $6 = 2 + \emptyset$

$\emptyset = 4$

5. $11 = \odot + 7$

$\odot = 4$

6. $7 = \oplus + 6$

$\oplus = 1$

7. $2 + 8 = \cup$

$\cup = 10$

8. $2 + \clubsuit = 11$

$\clubsuit = 9$

9. $\spadesuit + 7 = 14$

$\spadesuit = 7$

10. $\star + 3 = 11$

$\star = 8$

11. $8 = \blacksquare + 7$

$\blacksquare = 1$

12. $4 + 8 = \sharp$

$\sharp = 12$

13. $6 + \diamond = 13$

$\diamond = 7$

14. $5 + \heartsuit = 6$

$\heartsuit = 1$

15. $\triangle = 4 + 5$

$\triangle = 9$

16. $15 = \sphericalangle + 7$

$\sphericalangle = 8$

17. $10 = 4 + \blacktriangledown$

$\blacktriangledown = 6$

18. $\dagger + 4 = 10$

$\dagger = 6$

19. $12 = 3 + \spadesuit$

$\spadesuit = 9$

20. $10 = \S + 2$

$\S = 8$

Unknown Symbols in Equations (I)

Name: _____

Date: _____

Determine the value of each symbol.

1. $\triangle = 6 + 1$

2. $4 + \heartsuit = 10$

3. $2 + 3 = \star$

4. $6 = \# + 1$

5. $1 + \S = 6$

6. $2 + 7 = \clubsuit$

7. $1 + \oplus = 2$

8. $3 + \sphericalangle = 12$

9. $11 = 8 + \emptyset$

10. $15 = \diamond + 6$

11. $6 + 6 = \otimes$

12. $\bullet = 6 + 1$

13. $3 + \natural = 11$

14. $9 = 7 + \blacksquare$

15. $5 + 9 = \blacktriangledown$

16. $\spadesuit = 4 + 8$

17. $4 + \mathbb{U} = 9$

18. $\blacklozenge = 7 + 8$

19. $1 + 6 = \odot$

20. $13 = 5 + \dagger$

Unknown Symbols in Equations (I) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $\triangle = 6 + 1$

$\triangle = 7$

2. $4 + \heartsuit = 10$

$\heartsuit = 6$

3. $2 + 3 = \star$

$\star = 5$

4. $6 = \# + 1$

$\# = 5$

5. $1 + \S = 6$

$\S = 5$

6. $2 + 7 = \clubsuit$

$\clubsuit = 9$

7. $1 + \oplus = 2$

$\oplus = 1$

8. $3 + \sphericalangle = 12$

$\sphericalangle = 9$

9. $11 = 8 + \emptyset$

$\emptyset = 3$

10. $15 = \diamond + 6$

$\diamond = 9$

11. $6 + 6 = \otimes$

$\otimes = 12$

12. $\bullet = 6 + 1$

$\bullet = 7$

13. $3 + \natural = 11$

$\natural = 8$

14. $9 = 7 + \blacksquare$

$\blacksquare = 2$

15. $5 + 9 = \blacktriangledown$

$\blacktriangledown = 14$

16. $\spadesuit = 4 + 8$

$\spadesuit = 12$

17. $4 + \mathbb{U} = 9$

$\mathbb{U} = 5$

18. $\blacklozenge = 7 + 8$

$\blacklozenge = 15$

19. $1 + 6 = \odot$

$\odot = 7$

20. $13 = 5 + \dagger$

$\dagger = 8$

Unknown Symbols in Equations (J)

Name: _____

Date: _____

Determine the value of each symbol.

1. $\triangle = 5 + 2$

2. $9 + \odot = 11$

3. $8 + \blacksquare = 17$

4. $\diamond + 1 = 9$

5. $8 = \dagger + 1$

6. $6 + \heartsuit = 12$

7. $\clubsuit = 6 + 7$

8. $1 + 2 = \sphericalangle$

9. $7 + 4 = \emptyset$

10. $\# = 2 + 5$

11. $10 = 9 + \ddagger$

12. $5 + 8 = \oplus$

13. $12 = \blacktriangledown + 4$

14. $\bullet = 5 + 7$

15. $8 + \otimes = 15$

16. $4 + 7 = \cup$

17. $\blacklozenge + 1 = 5$

18. $10 = 8 + \S$

19. $\star = 8 + 3$

20. $9 = \spadesuit + 6$

Unknown Symbols in Equations (J) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $\triangle = 5 + 2$

$\triangle = 7$

2. $9 + \odot = 11$

$\odot = 2$

3. $8 + \blacksquare = 17$

$\blacksquare = 9$

4. $\diamond + 1 = 9$

$\diamond = 8$

5. $8 = \dagger + 1$

$\dagger = 7$

6. $6 + \heartsuit = 12$

$\heartsuit = 6$

7. $\clubsuit = 6 + 7$

$\clubsuit = 13$

8. $1 + 2 = \sphericalangle$

$\sphericalangle = 3$

9. $7 + 4 = \emptyset$

$\emptyset = 11$

10. $\# = 2 + 5$

$\# = 7$

11. $10 = 9 + \natural$

$\natural = 1$

12. $5 + 8 = \oplus$

$\oplus = 13$

13. $12 = \blacktriangledown + 4$

$\blacktriangledown = 8$

14. $\bullet = 5 + 7$

$\bullet = 12$

15. $8 + \otimes = 15$

$\otimes = 7$

16. $4 + 7 = \cup$

$\cup = 11$

17. $\blacklozenge + 1 = 5$

$\blacklozenge = 4$

18. $10 = 8 + \S$

$\S = 2$

19. $\star = 8 + 3$

$\star = 11$

20. $9 = \spadesuit + 6$

$\spadesuit = 3$