

Unknown Symbols in Equations (A)

Name: _____

Date: _____

Determine the value of each symbol.

1. $14 - 6 = \heartsuit$

2. $16 = 20 - \sphericalangle$

3. $\spadesuit - 2 = 20$

4. $6 = \triangle - 10$

5. $18 = \otimes - 7$

6. $\diamond = 29 - 13$

7. $16 - 5 = \cup$

8. $\oplus = 22 - 17$

9. $15 = \dagger - 12$

10. $30 - 11 = \star$

11. $15 = 35 - \emptyset$

12. $\blacksquare = 2 - 1$

13. $3 = \blacktriangledown - 14$

14. $17 - 15 = \clubsuit$

15. $\blacklozenge - 7 = 17$

16. $\odot - 6 = 12$

17. $\# - 7 = 11$

18. $3 - 1 = \S$

19. $\natural - 5 = 17$

20. $\bullet - 18 = 15$

Unknown Symbols in Equations (A) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $14 - 6 = \heartsuit$

$\heartsuit = 8$

2. $16 = 20 - \sphericalangle$

$\sphericalangle = 4$

3. $\spadesuit - 2 = 20$

$\spadesuit = 22$

4. $6 = \triangle - 10$

$\triangle = 16$

5. $18 = \otimes - 7$

$\otimes = 25$

6. $\diamond = 29 - 13$

$\diamond = 16$

7. $16 - 5 = \cup$

$\cup = 11$

8. $\oplus = 22 - 17$

$\oplus = 5$

9. $15 = \dagger - 12$

$\dagger = 27$

10. $30 - 11 = \star$

$\star = 19$

11. $15 = 35 - \emptyset$

$\emptyset = 20$

12. $\blacksquare = 2 - 1$

$\blacksquare = 1$

13. $3 = \blacktriangledown - 14$

$\blacktriangledown = 17$

14. $17 - 15 = \clubsuit$

$\clubsuit = 2$

15. $\blacklozenge - 7 = 17$

$\blacklozenge = 24$

16. $\odot - 6 = 12$

$\odot = 18$

17. $\sharp - 7 = 11$

$\sharp = 18$

18. $3 - 1 = \S$

$\S = 2$

19. $\natural - 5 = 17$

$\natural = 22$

20. $\bullet - 18 = 15$

$\bullet = 33$

Unknown Symbols in Equations (B)

Name: _____

Date: _____

Determine the value of each symbol.

1. $12 - \blacklozenge = 4$

2. $15 = \blackstar - 10$

3. $16 = 24 - \#$

4. $\oplus = 10 - 5$

5. $13 - 4 = \emptyset$

6. $\heartsuit - 19 = 15$

7. $\spadesuit - 17 = 12$

8. $\odot = 15 - 8$

9. $\spadesuit - 11 = 14$

10. $20 = \blacksquare - 5$

11. $12 = \S - 20$

12. $8 = \dagger - 5$

13. $\blacktriangledown - 14 = 6$

14. $16 - \otimes = 6$

15. $16 - \wp = 14$

16. $18 - 11 = \sphericalangle$

17. $13 = \clubsuit - 2$

18. $\triangle - 13 = 5$

19. $30 - \blacklozenge = 14$

20. $16 - \bullet = 15$

Unknown Symbols in Equations (B) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $12 - \blacklozenge = 4$

$\blacklozenge = 8$

2. $15 = \blackstar - 10$

$\blackstar = 25$

3. $16 = 24 - \#$

$\# = 8$

4. $\oplus = 10 - 5$

$\oplus = 5$

5. $13 - 4 = \emptyset$

$\emptyset = 9$

6. $\heartsuit - 19 = 15$

$\heartsuit = 34$

7. $\spadesuit - 17 = 12$

$\spadesuit = 29$

8. $\odot = 15 - 8$

$\odot = 7$

9. $\spadesuit - 11 = 14$

$\spadesuit = 25$

10. $20 = \blacksquare - 5$

$\blacksquare = 25$

11. $12 = \S - 20$

$\S = 32$

12. $8 = \dagger - 5$

$\dagger = 13$

13. $\blacktriangledown - 14 = 6$

$\blacktriangledown = 20$

14. $16 - \otimes = 6$

$\otimes = 10$

15. $16 - \cup = 14$

$\cup = 2$

16. $18 - 11 = \sphericalangle$

$\sphericalangle = 7$

17. $13 = \clubsuit - 2$

$\clubsuit = 15$

18. $\triangle - 13 = 5$

$\triangle = 18$

19. $30 - \blacklozenge = 14$

$\blacklozenge = 16$

20. $16 - \bullet = 15$

$\bullet = 1$

Unknown Symbols in Equations (C)

Name: _____

Date: _____

Determine the value of each symbol.

1. $\clubsuit = 17 - 11$

2. $2 = 10 - \xi$

3. $\spadesuit - 13 = 16$

4. $12 = 19 - \odot$

5. $9 = 28 - \triangle$

6. $22 - 18 = \bullet$

7. $\oplus = 9 - 5$

8. $30 - \blacktriangledown = 14$

9. $28 - 14 = \blacksquare$

10. $10 = 20 - \blacklozenge$

11. $\otimes = 13 - 3$

12. $16 - 12 = \cup$

13. $12 = 26 - \dagger$

14. $\spadesuit - 16 = 17$

15. $23 - 3 = \heartsuit$

16. $3 = \star - 20$

17. $17 = 18 - \emptyset$

18. $33 - 16 = \#$

19. $\sphericalangle = 20 - 18$

20. $20 - \diamond = 5$

Unknown Symbols in Equations (C) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $\clubsuit = 17 - 11$

$\clubsuit = 6$

2. $2 = 10 - \xi$

$\xi = 8$

3. $\spadesuit - 13 = 16$

$\spadesuit = 29$

4. $12 = 19 - \odot$

$\odot = 7$

5. $9 = 28 - \triangle$

$\triangle = 19$

6. $22 - 18 = \bullet$

$\bullet = 4$

7. $\oplus = 9 - 5$

$\oplus = 4$

8. $30 - \blacktriangledown = 14$

$\blacktriangledown = 16$

9. $28 - 14 = \blacksquare$

$\blacksquare = 14$

10. $10 = 20 - \blacklozenge$

$\blacklozenge = 10$

11. $\otimes = 13 - 3$

$\otimes = 10$

12. $16 - 12 = \cup$

$\cup = 4$

13. $12 = 26 - \dagger$

$\dagger = 14$

14. $\spadesuit - 16 = 17$

$\spadesuit = 33$

15. $23 - 3 = \heartsuit$

$\heartsuit = 20$

16. $3 = \star - 20$

$\star = 23$

17. $17 = 18 - \emptyset$

$\emptyset = 1$

18. $33 - 16 = \sharp$

$\sharp = 17$

19. $\sphericalangle = 20 - 18$

$\sphericalangle = 2$

20. $20 - \diamond = 5$

$\diamond = 15$

Unknown Symbols in Equations (D)

Name: _____

Date: _____

Determine the value of each symbol.

1. $5 - \emptyset = 2$

2. $\blacksquare = 29 - 20$

3. $\diamond = 20 - 11$

4. $36 - \otimes = 16$

5. $\bullet = 35 - 20$

6. $\spadesuit = 20 - 5$

7. $10 = 28 - \blacklozenge$

8. $\oplus - 5 = 19$

9. $\cup = 12 - 6$

10. $28 - \natural = 10$

11. $2 = 10 - \blacktriangledown$

12. $\sharp = 22 - 11$

13. $15 = 29 - \odot$

14. $\triangle = 36 - 16$

15. $20 = \star - 20$

16. $21 - \dagger = 18$

17. $23 - 19 = \heartsuit$

18. $\S = 26 - 13$

19. $23 - 19 = \sphericalangle$

20. $\clubsuit - 2 = 19$

Unknown Symbols in Equations (D) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $5 - \emptyset = 2$

$\emptyset = 3$

2. $\blacksquare = 29 - 20$

$\blacksquare = 9$

3. $\diamond = 20 - 11$

$\diamond = 9$

4. $36 - \otimes = 16$

$\otimes = 20$

5. $\bullet = 35 - 20$

$\bullet = 15$

6. $\spadesuit = 20 - 5$

$\spadesuit = 15$

7. $10 = 28 - \blacklozenge$

$\blacklozenge = 18$

8. $\oplus - 5 = 19$

$\oplus = 24$

9. $\cup = 12 - 6$

$\cup = 6$

10. $28 - \natural = 10$

$\natural = 18$

11. $2 = 10 - \blacktriangledown$

$\blacktriangledown = 8$

12. $\sharp = 22 - 11$

$\sharp = 11$

13. $15 = 29 - \odot$

$\odot = 14$

14. $\triangle = 36 - 16$

$\triangle = 20$

15. $20 = \star - 20$

$\star = 40$

16. $21 - \dagger = 18$

$\dagger = 3$

17. $23 - 19 = \heartsuit$

$\heartsuit = 4$

18. $\S = 26 - 13$

$\S = 13$

19. $23 - 19 = \sphericalangle$

$\sphericalangle = 4$

20. $\clubsuit - 2 = 19$

$\clubsuit = 21$

Unknown Symbols in Equations (E)

Name: _____

Date: _____

Determine the value of each symbol.

1. $8 = 17 - \dagger$

2. $10 - 5 = \ddagger$

3. $\mathbb{U} = 19 - 11$

4. $8 = 22 - \otimes$

5. $24 - \natural = 11$

6. $28 - \oplus = 13$

7. $\blacktriangledown - 20 = 15$

8. $\blacklozenge = 19 - 5$

9. $18 - 7 = \odot$

10. $\S - 12 = 9$

11. $\clubsuit = 8 - 7$

12. $\sphericalangle = 37 - 17$

13. $20 - \diamond = 2$

14. $\heartsuit - 10 = 16$

15. $\star - 1 = 1$

16. $25 - 13 = \bullet$

17. $\blacksquare - 2 = 6$

18. $16 = \triangle - 6$

19. $16 - \spadesuit = 14$

20. $3 = 14 - \emptyset$

Unknown Symbols in Equations (E) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $8 = 17 - \dagger$

$\dagger = 9$

2. $10 - 5 = \ddagger$

$\ddagger = 5$

3. $\mathbb{U} = 19 - 11$

$\mathbb{U} = 8$

4. $8 = 22 - \otimes$

$\otimes = 14$

5. $24 - \natural = 11$

$\natural = 13$

6. $28 - \oplus = 13$

$\oplus = 15$

7. $\blacktriangledown - 20 = 15$

$\blacktriangledown = 35$

8. $\blacklozenge = 19 - 5$

$\blacklozenge = 14$

9. $18 - 7 = \odot$

$\odot = 11$

10. $\S - 12 = 9$

$\S = 21$

11. $\clubsuit = 8 - 7$

$\clubsuit = 1$

12. $\sphericalangle = 37 - 17$

$\sphericalangle = 20$

13. $20 - \diamond = 2$

$\diamond = 18$

14. $\heartsuit - 10 = 16$

$\heartsuit = 26$

15. $\star - 1 = 1$

$\star = 2$

16. $25 - 13 = \bullet$

$\bullet = 12$

17. $\blacksquare - 2 = 6$

$\blacksquare = 8$

18. $16 = \triangle - 6$

$\triangle = 22$

19. $16 - \spadesuit = 14$

$\spadesuit = 2$

20. $3 = 14 - \emptyset$

$\emptyset = 11$

Unknown Symbols in Equations (F)

Name: _____

Date: _____

Determine the value of each symbol.

1. $7 = 11 - \star$

2. $21 - \dagger = 19$

3. $\cup = 26 - 17$

4. $21 - 2 = \blacktriangledown$

5. $13 = \blacksquare - 16$

6. $8 = 26 - \otimes$

7. $1 = 18 - \clubsuit$

8. $13 = 20 - \S$

9. $\sphericalangle - 15 = 14$

10. $5 = \oplus - 1$

11. $\# = 24 - 4$

12. $20 = \diamond - 11$

13. $20 - \bullet = 16$

14. $2 - 1 = \spadesuit$

15. $\emptyset - 11 = 19$

16. $11 - 10 = \natural$

17. $\heartsuit = 16 - 4$

18. $3 = 21 - \blacklozenge$

19. $3 = \triangle - 16$

20. $\odot - 16 = 12$

Unknown Symbols in Equations (F) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $7 = 11 - \star$

$\star = 4$

2. $21 - \dagger = 19$

$\dagger = 2$

3. $\cup = 26 - 17$

$\cup = 9$

4. $21 - 2 = \blacktriangledown$

$\blacktriangledown = 19$

5. $13 = \blacksquare - 16$

$\blacksquare = 29$

6. $8 = 26 - \otimes$

$\otimes = 18$

7. $1 = 18 - \clubsuit$

$\clubsuit = 17$

8. $13 = 20 - \xi$

$\xi = 7$

9. $\sphericalangle - 15 = 14$

$\sphericalangle = 29$

10. $5 = \oplus - 1$

$\oplus = 6$

11. $\# = 24 - 4$

$\# = 20$

12. $20 = \diamond - 11$

$\diamond = 31$

13. $20 - \bullet = 16$

$\bullet = 4$

14. $2 - 1 = \spadesuit$

$\spadesuit = 1$

15. $\emptyset - 11 = 19$

$\emptyset = 30$

16. $11 - 10 = \natural$

$\natural = 1$

17. $\heartsuit = 16 - 4$

$\heartsuit = 12$

18. $3 = 21 - \blacklozenge$

$\blacklozenge = 18$

19. $3 = \triangle - 16$

$\triangle = 19$

20. $\odot - 16 = 12$

$\odot = 28$

Unknown Symbols in Equations (G)

Name: _____

Date: _____

Determine the value of each symbol.

1. $\blacksquare = 19 - 6$

2. $13 - \otimes = 4$

3. $13 - 5 = \heartsuit$

4. $20 = \blacktriangledown - 5$

5. $28 - \triangle = 20$

6. $23 - \blacklozenge = 10$

7. $34 - 18 = \dagger$

8. $20 - 11 = \S$

9. $\emptyset = 5 - 2$

10. $\bullet - 10 = 2$

11. $\odot = 15 - 8$

12. $13 = 29 - \diamond$

13. $\star - 19 = 16$

14. $12 = \oplus - 9$

15. $28 - \clubsuit = 20$

16. $3 = \spadesuit - 4$

17. $28 - 10 = \ddagger$

18. $33 - 17 = \natural$

19. $\cup - 18 = 8$

20. $\angle - 20 = 9$

Unknown Symbols in Equations (G) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $\blacksquare = 19 - 6$

$\blacksquare = 13$

2. $13 - \otimes = 4$

$\otimes = 9$

3. $13 - 5 = \heartsuit$

$\heartsuit = 8$

4. $20 = \blacktriangledown - 5$

$\blacktriangledown = 25$

5. $28 - \triangle = 20$

$\triangle = 8$

6. $23 - \blacklozenge = 10$

$\blacklozenge = 13$

7. $34 - 18 = \dagger$

$\dagger = 16$

8. $20 - 11 = \S$

$\S = 9$

9. $\emptyset = 5 - 2$

$\emptyset = 3$

10. $\bullet - 10 = 2$

$\bullet = 12$

11. $\odot = 15 - 8$

$\odot = 7$

12. $13 = 29 - \diamond$

$\diamond = 16$

13. $\star - 19 = 16$

$\star = 35$

14. $12 = \oplus - 9$

$\oplus = 21$

15. $28 - \clubsuit = 20$

$\clubsuit = 8$

16. $3 = \spadesuit - 4$

$\spadesuit = 7$

17. $28 - 10 = \ddagger$

$\ddagger = 18$

18. $33 - 17 = \natural$

$\natural = 16$

19. $\cup - 18 = 8$

$\cup = 26$

20. $\sphericalangle - 20 = 9$

$\sphericalangle = 29$

Unknown Symbols in Equations (H)

Name: _____

Date: _____

Determine the value of each symbol.

1. $\emptyset = 21 - 7$

2. $\clubsuit = 11 - 3$

3. $7 = \triangle - 7$

4. $15 = \heartsuit - 9$

5. $\diamond = 30 - 17$

6. $\sphericalangle - 12 = 15$

7. $37 - 18 = \cup$

8. $6 = \blacklozenge - 9$

9. $\S - 14 = 17$

10. $10 - \oplus = 2$

11. $\# = 31 - 19$

12. $\dagger = 17 - 14$

13. $17 = \odot - 11$

14. $19 = \blacktriangledown - 3$

15. $\dagger - 13 = 2$

16. $10 = 22 - \spadesuit$

17. $35 - \otimes = 15$

18. $12 = \bullet - 14$

19. $15 - \star = 14$

20. $\blacksquare = 34 - 17$

Unknown Symbols in Equations (H) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $\emptyset = 21 - 7$

$\emptyset = 14$

2. $\clubsuit = 11 - 3$

$\clubsuit = 8$

3. $7 = \triangle - 7$

$\triangle = 14$

4. $15 = \heartsuit - 9$

$\heartsuit = 24$

5. $\diamond = 30 - 17$

$\diamond = 13$

6. $\sphericalangle - 12 = 15$

$\sphericalangle = 27$

7. $37 - 18 = \cup$

$\cup = 19$

8. $6 = \blacklozenge - 9$

$\blacklozenge = 15$

9. $\S - 14 = 17$

$\S = 31$

10. $10 - \oplus = 2$

$\oplus = 8$

11. $\# = 31 - 19$

$\# = 12$

12. $\bigr = 17 - 14$

$\bigr = 3$

13. $17 = \odot - 11$

$\odot = 28$

14. $19 = \blacktriangledown - 3$

$\blacktriangledown = 22$

15. $\dagger - 13 = 2$

$\dagger = 15$

16. $10 = 22 - \spadesuit$

$\spadesuit = 12$

17. $35 - \otimes = 15$

$\otimes = 20$

18. $12 = \bullet - 14$

$\bullet = 26$

19. $15 - \star = 14$

$\star = 1$

20. $\blacksquare = 34 - 17$

$\blacksquare = 17$

Unknown Symbols in Equations (I)

Name: _____

Date: _____

Determine the value of each symbol.

1. $4 = 23 - \blacktriangledown$

2. $\oplus = 22 - 4$

3. $\diamond - 17 = 10$

4. $\natural = 6 - 2$

5. $15 - \sharp = 9$

6. $\S = 31 - 11$

7. $29 - \clubsuit = 13$

8. $\blacksquare = 27 - 19$

9. $6 = \odot - 15$

10. $10 = \cup - 1$

11. $19 = 35 - \bullet$

12. $20 - 5 = \spadesuit$

13. $\dagger = 19 - 1$

14. $9 = \triangle - 6$

15. $2 = 3 - \heartsuit$

16. $21 - \star = 4$

17. $14 = 34 - \emptyset$

18. $\blacklozenge = 25 - 7$

19. $\sphericalangle - 12 = 3$

20. $29 - \otimes = 12$

Unknown Symbols in Equations (I) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $4 = 23 - \blacktriangledown$

$\blacktriangledown = 19$

2. $\oplus = 22 - 4$

$\oplus = 18$

3. $\diamond - 17 = 10$

$\diamond = 27$

4. $\natural = 6 - 2$

$\natural = 4$

5. $15 - \sharp = 9$

$\sharp = 6$

6. $\S = 31 - 11$

$\S = 20$

7. $29 - \clubsuit = 13$

$\clubsuit = 16$

8. $\blacksquare = 27 - 19$

$\blacksquare = 8$

9. $6 = \odot - 15$

$\odot = 21$

10. $10 = \cup - 1$

$\cup = 11$

11. $19 = 35 - \bullet$

$\bullet = 16$

12. $20 - 5 = \spadesuit$

$\spadesuit = 15$

13. $\dagger = 19 - 1$

$\dagger = 18$

14. $9 = \triangle - 6$

$\triangle = 15$

15. $2 = 3 - \heartsuit$

$\heartsuit = 1$

16. $21 - \star = 4$

$\star = 17$

17. $14 = 34 - \emptyset$

$\emptyset = 20$

18. $\blacklozenge = 25 - 7$

$\blacklozenge = 18$

19. $\sphericalangle - 12 = 3$

$\sphericalangle = 15$

20. $29 - \otimes = 12$

$\otimes = 17$

Unknown Symbols in Equations (J)

Name: _____

Date: _____

Determine the value of each symbol.

1. $15 = \star - 16$

2. $\odot - 17 = 19$

3. $8 = 27 - \blacksquare$

4. $\dagger - 12 = 17$

5. $27 - 11 = \blacklozenge$

6. $\bullet - 6 = 12$

7. $\emptyset - 6 = 7$

8. $\sphericalangle - 13 = 17$

9. $40 - 20 = \heartsuit$

10. $20 = 35 - \S$

11. $11 = \triangle - 13$

12. $22 - \clubsuit = 8$

13. $18 = 35 - \cup$

14. $\oplus = 34 - 14$

15. $19 = \otimes - 3$

16. $27 - \diamond = 19$

17. $19 - \spadesuit = 14$

18. $7 = \blacktriangledown - 18$

19. $1 = \# - 18$

20. $16 = \natural - 18$

Unknown Symbols in Equations (J) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $15 = \star - 16$

$\star = 31$

2. $\odot - 17 = 19$

$\odot = 36$

3. $8 = 27 - \blacksquare$

$\blacksquare = 19$

4. $\dagger - 12 = 17$

$\dagger = 29$

5. $27 - 11 = \blacklozenge$

$\blacklozenge = 16$

6. $\bullet - 6 = 12$

$\bullet = 18$

7. $\emptyset - 6 = 7$

$\emptyset = 13$

8. $\sphericalangle - 13 = 17$

$\sphericalangle = 30$

9. $40 - 20 = \heartsuit$

$\heartsuit = 20$

10. $20 = 35 - \S$

$\S = 15$

11. $11 = \triangle - 13$

$\triangle = 24$

12. $22 - \clubsuit = 8$

$\clubsuit = 14$

13. $18 = 35 - \cup$

$\cup = 17$

14. $\oplus = 34 - 14$

$\oplus = 20$

15. $19 = \otimes - 3$

$\otimes = 22$

16. $27 - \blacklozenge = 19$

$\blacklozenge = 8$

17. $19 - \spadesuit = 14$

$\spadesuit = 5$

18. $7 = \blacktriangledown - 18$

$\blacktriangledown = 25$

19. $1 = \# - 18$

$\# = 19$

20. $16 = \natural - 18$

$\natural = 34$