

Unknown Symbols in Equations (A)

Name: _____

Date: _____

Determine the value of each symbol.

1. $9 = 1 \times \dagger$

2. $\oplus + 5 = 7$

3. $\blacklozenge = 4 - 3$

4. $1 + 8 = \cup$

5. $\bullet + 17 = 35$

6. $5 = 11 - \clubsuit$

7. $3 = \odot \div 4$

8. $4 \times \sphericalangle = 44$

9. $2 \times 20 = \diamond$

10. $\heartsuit \times 13 = 52$

11. $9 - 3 = \spadesuit$

12. $\blacktriangledown = 11 \times 2$

13. $25 - \emptyset = 14$

14. $170 = \blacksquare \times 10$

15. $\triangle = 13 \times 4$

16. $5 = \star - 14$

17. $\spadesuit - 1 = 4$

18. $\otimes = 18 + 19$

19. $38 = 18 + \S$

20. $17 = 22 - \#$

Unknown Symbols in Equations (A) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $9 = 1 \times \dagger$

$\dagger = 9$

2. $\oplus + 5 = 7$

$\oplus = 2$

3. $\blacklozenge = 4 - 3$

$\blacklozenge = 1$

4. $1 + 8 = \cup$

$\cup = 9$

5. $\bullet + 17 = 35$

$\bullet = 18$

6. $5 = 11 - \clubsuit$

$\clubsuit = 6$

7. $3 = \odot \div 4$

$\odot = 12$

8. $4 \times \sphericalangle = 44$

$\sphericalangle = 11$

9. $2 \times 20 = \diamond$

$\diamond = 40$

10. $\heartsuit \times 13 = 52$

$\heartsuit = 4$

11. $9 - 3 = \spadesuit$

$\spadesuit = 6$

12. $\blacktriangledown = 11 \times 2$

$\blacktriangledown = 22$

13. $25 - \emptyset = 14$

$\emptyset = 11$

14. $170 = \blacksquare \times 10$

$\blacksquare = 17$

15. $\triangle = 13 \times 4$

$\triangle = 52$

16. $5 = \star - 14$

$\star = 19$

17. $\spadesuit - 1 = 4$

$\spadesuit = 5$

18. $\otimes = 18 + 19$

$\otimes = 37$

19. $38 = 18 + \S$

$\S = 20$

20. $17 = 22 - \#$

$\# = 5$

Unknown Symbols in Equations (B)

Name: _____

Date: _____

Determine the value of each symbol.

1. $10 + 5 = \#$

2. $320 \div \sphericalangle = 16$

3. $\blacksquare = 14 - 5$

4. $13 = \spadesuit - 7$

5. $2 \times \heartsuit = 20$

6. $14 = 24 - \S$

7. $208 = 13 \times \blacktriangledown$

8. $\dagger \times 16 = 176$

9. $20 = 34 - \odot$

10. $10 \times \oplus = 70$

11. $\cup = 19 + 7$

12. $\star - 3 = 16$

13. $23 = 16 + \natural$

14. $11 + \emptyset = 16$

15. $17 = 153 \div \clubsuit$

16. $288 = \bullet \times 16$

17. $17 - 10 = \blacklozenge$

18. $\diamond = 18 \times 10$

19. $\otimes - 4 = 19$

20. $3 + \triangle = 22$

Unknown Symbols in Equations (B) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $10 + 5 = \#$

$\# = 15$

2. $320 \div \sphericalangle = 16$

$\sphericalangle = 20$

3. $\blacksquare = 14 - 5$

$\blacksquare = 9$

4. $13 = \spadesuit - 7$

$\spadesuit = 20$

5. $2 \times \heartsuit = 20$

$\heartsuit = 10$

6. $14 = 24 - \S$

$\S = 10$

7. $208 = 13 \times \blacktriangledown$

$\blacktriangledown = 16$

8. $\dagger \times 16 = 176$

$\dagger = 11$

9. $20 = 34 - \odot$

$\odot = 14$

10. $10 \times \oplus = 70$

$\oplus = 7$

11. $\mathbb{U} = 19 + 7$

$\mathbb{U} = 26$

12. $\star - 3 = 16$

$\star = 19$

13. $23 = 16 + \natural$

$\natural = 7$

14. $11 + \emptyset = 16$

$\emptyset = 5$

15. $17 = 153 \div \clubsuit$

$\clubsuit = 9$

16. $288 = \bullet \times 16$

$\bullet = 18$

17. $17 - 10 = \blacklozenge$

$\blacklozenge = 7$

18. $\blacklozenge = 18 \times 10$

$\blacklozenge = 180$

19. $\otimes - 4 = 19$

$\otimes = 23$

20. $3 + \triangle = 22$

$\triangle = 19$

Unknown Symbols in Equations (C)

Name: _____

Date: _____

Determine the value of each symbol.

1. $25 = \emptyset + 19$

2. $20 = \heartsuit + 11$

3. $24 - 8 = \triangle$

4. $180 = \blacktriangledown \times 18$

5. $29 = 10 + \diamond$

6. $1 + \S = 20$

7. $14 \div \dagger = 2$

8. $\sphericalangle \times 1 = 8$

9. $\# - 12 = 19$

10. $18 - \bullet = 12$

11. $31 = \natural + 12$

12. $8 = \blacksquare \div 19$

13. $31 - \wp = 11$

14. $\oplus = 21 - 7$

15. $\otimes = 15 + 6$

16. $\blacklozenge + 8 = 17$

17. $20 - \odot = 5$

18. $132 = 11 \times \star$

19. $8 = \clubsuit \div 20$

20. $10 \times 1 = \spadesuit$

Unknown Symbols in Equations (C) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $25 = \emptyset + 19$

$\emptyset = 6$

2. $20 = \heartsuit + 11$

$\heartsuit = 9$

3. $24 - 8 = \triangle$

$\triangle = 16$

4. $180 = \blacktriangledown \times 18$

$\blacktriangledown = 10$

5. $29 = 10 + \diamond$

$\diamond = 19$

6. $1 + \xi = 20$

$\xi = 19$

7. $14 \div \dagger = 2$

$\dagger = 7$

8. $\sphericalangle \times 1 = 8$

$\sphericalangle = 8$

9. $\# - 12 = 19$

$\# = 31$

10. $18 - \bullet = 12$

$\bullet = 6$

11. $31 = \natural + 12$

$\natural = 19$

12. $8 = \blacksquare \div 19$

$\blacksquare = 152$

13. $31 - \uplus = 11$

$\uplus = 20$

14. $\oplus = 21 - 7$

$\oplus = 14$

15. $\otimes = 15 + 6$

$\otimes = 21$

16. $\blacklozenge + 8 = 17$

$\blacklozenge = 9$

17. $20 - \odot = 5$

$\odot = 15$

18. $132 = 11 \times \star$

$\star = 12$

19. $8 = \clubsuit \div 20$

$\clubsuit = 160$

20. $10 \times 1 = \spadesuit$

$\spadesuit = 10$

Unknown Symbols in Equations (D)

Name: _____

Date: _____

Determine the value of each symbol.

1. $280 \div 14 = \spadesuit$

2. $54 = 18 \times \clubsuit$

3. $11 = 66 \div \blacksquare$

4. $10 \times 16 = \bullet$

5. $18 = 180 \div \otimes$

6. $\clubsuit = 2 + 15$

7. $1 = 10 - \oplus$

8. $28 - \heartsuit = 15$

9. $20 - 19 = \ddagger$

10. $\blacklozenge - 17 = 19$

11. $\triangle \div 20 = 17$

12. $\odot = 14 - 8$

13. $17 + 7 = \star$

14. $\blacklozenge - 16 = 12$

15. $3 + 17 = \emptyset$

16. $15 = \sphericalangle - 18$

17. $9 = 19 - \S$

18. $15 + \mathbb{U} = 19$

19. $10 + 3 = \blacktriangledown$

20. $\dagger - 14 = 1$

Unknown Symbols in Equations (D) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $280 \div 14 = \spadesuit$

$\spadesuit = 20$

2. $54 = 18 \times \clubsuit$

$\clubsuit = 3$

3. $11 = 66 \div \blacksquare$

$\blacksquare = 6$

4. $10 \times 16 = \bullet$

$\bullet = 160$

5. $18 = 180 \div \otimes$

$\otimes = 10$

6. $\clubsuit = 2 + 15$

$\clubsuit = 17$

7. $1 = 10 - \oplus$

$\oplus = 9$

8. $28 - \heartsuit = 15$

$\heartsuit = 13$

9. $20 - 19 = \sharp$

$\sharp = 1$

10. $\blacklozenge - 17 = 19$

$\blacklozenge = 36$

11. $\triangle \div 20 = 17$

$\triangle = 340$

12. $\odot = 14 - 8$

$\odot = 6$

13. $17 + 7 = \star$

$\star = 24$

14. $\blacklozenge - 16 = 12$

$\blacklozenge = 28$

15. $3 + 17 = \emptyset$

$\emptyset = 20$

16. $15 = \sphericalangle - 18$

$\sphericalangle = 33$

17. $9 = 19 - \S$

$\S = 10$

18. $15 + \mathcal{U} = 19$

$\mathcal{U} = 4$

19. $10 + 3 = \blacktriangledown$

$\blacktriangledown = 13$

20. $\dagger - 14 = 1$

$\dagger = 15$

Unknown Symbols in Equations (E)

Name: _____

Date: _____

Determine the value of each symbol.

1. $18 \times \blacklozenge = 288$

2. $16 = 20 - \blacklozenge$

3. $\blackcup \div 14 = 15$

4. $132 \div \blackdagger = 11$

5. $3 + 14 = \oplus$

6. $8 = \clubsuit - 2$

7. $2 = 18 \div \dagger$

8. $221 = \emptyset \times 13$

9. $\otimes - 9 = 6$

10. $\blackdagger \times 20 = 340$

11. $17 = \spadesuit - 10$

12. $11 \times 18 = \sphericalangle$

13. $\blackstar \times 14 = 252$

14. $10 = \triangle - 15$

15. $\heartsuit \times 20 = 400$

16. $\bullet \div 8 = 17$

17. $13 - 6 = \blacksquare$

18. $24 = 5 + \S$

19. $25 \div 5 = \blacktriangledown$

20. $\odot \div 14 = 3$

Unknown Symbols in Equations (E) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $18 \times \blacklozenge = 288$

$\blacklozenge = 16$

2. $16 = 20 - \blacklozenge$

$\blacklozenge = 4$

3. $\mathbb{U} \div 14 = 15$

$\mathbb{U} = 210$

4. $132 \div \mathbb{H} = 11$

$\mathbb{H} = 12$

5. $3 + 14 = \oplus$

$\oplus = 17$

6. $8 = \clubsuit - 2$

$\clubsuit = 10$

7. $2 = 18 \div \dagger$

$\dagger = 9$

8. $221 = \emptyset \times 13$

$\emptyset = 17$

9. $\otimes - 9 = 6$

$\otimes = 15$

10. $\mathbb{H} \times 20 = 340$

$\mathbb{H} = 17$

11. $17 = \spadesuit - 10$

$\spadesuit = 27$

12. $11 \times 18 = \sphericalangle$

$\sphericalangle = 198$

13. $\star \times 14 = 252$

$\star = 18$

14. $10 = \triangle - 15$

$\triangle = 25$

15. $\heartsuit \times 20 = 400$

$\heartsuit = 20$

16. $\bullet \div 8 = 17$

$\bullet = 136$

17. $13 - 6 = \blacksquare$

$\blacksquare = 7$

18. $24 = 5 + \S$

$\S = 19$

19. $25 \div 5 = \blacktriangledown$

$\blacktriangledown = 5$

20. $\odot \div 14 = 3$

$\odot = 42$

Unknown Symbols in Equations (F)

Name: _____

Date: _____

Determine the value of each symbol.

1. $10 = \sphericalangle \div 8$

2. $190 \div \blacktriangledown = 19$

3. $\# = 56 \div 14$

4. $204 = 17 \times \spadesuit$

5. $36 = \odot + 20$

6. $22 - \diamond = 5$

7. $\dagger \div 9 = 18$

8. $16 \times 10 = \triangle$

9. $\clubsuit \div 11 = 20$

10. $\emptyset = 26 - 19$

11. $15 + \heartsuit = 16$

12. $\oplus = 5 \times 5$

13. $10 = 23 - \otimes$

14. $3 = 3 \div \blacklozenge$

15. $18 = \bullet - 5$

16. $16 - 9 = \S$

17. $100 = \cup \times 5$

18. $77 \div \blacksquare = 11$

19. $19 = 38 - \dagger$

20. $4 = \star + 1$

Unknown Symbols in Equations (F) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $10 = \sphericalangle \div 8$

$\sphericalangle = 80$

2. $190 \div \blacktriangledown = 19$

$\blacktriangledown = 10$

3. $\# = 56 \div 14$

$\# = 4$

4. $204 = 17 \times \spadesuit$

$\spadesuit = 12$

5. $36 = \odot + 20$

$\odot = 16$

6. $22 - \diamond = 5$

$\diamond = 17$

7. $\dagger \div 9 = 18$

$\dagger = 162$

8. $16 \times 10 = \triangle$

$\triangle = 160$

9. $\clubsuit \div 11 = 20$

$\clubsuit = 220$

10. $\emptyset = 26 - 19$

$\emptyset = 7$

11. $15 + \heartsuit = 16$

$\heartsuit = 1$

12. $\oplus = 5 \times 5$

$\oplus = 25$

13. $10 = 23 - \otimes$

$\otimes = 13$

14. $3 = 3 \div \blacklozenge$

$\blacklozenge = 1$

15. $18 = \bullet - 5$

$\bullet = 23$

16. $16 - 9 = \S$

$\S = 7$

17. $100 = \mathcal{U} \times 5$

$\mathcal{U} = 20$

18. $77 \div \blacksquare = 11$

$\blacksquare = 7$

19. $19 = 38 - \natural$

$\natural = 19$

20. $4 = \star + 1$

$\star = 3$

Unknown Symbols in Equations (G)

Name: _____

Date: _____

Determine the value of each symbol.

1. $20 \times \otimes = 180$

2. $20 + 15 = \blacktriangledown$

3. $11 + 19 = \blacklozenge$

4. $285 = 19 \times \triangle$

5. $11 = 6 + \sphericalangle$

6. $10 \times 17 = \emptyset$

7. $\clubsuit \div 3 = 2$

8. $\# - 4 = 13$

9. $\diamond = 1 + 19$

10. $\heartsuit = 300 \div 20$

11. $\cup = 19 \times 11$

12. $14 + \oplus = 16$

13. $3 = 17 - \odot$

14. $\bullet - 5 = 2$

15. $2 \times \dagger = 38$

16. $\blacksquare + 15 = 30$

17. $31 - 13 = \spadesuit$

18. $238 = \S \times 17$

19. $13 = 21 - \star$

20. $\natural \div 5 = 11$

Unknown Symbols in Equations (G) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $20 \times \otimes = 180$

$\otimes = 9$

2. $20 + 15 = \blacktriangledown$

$\blacktriangledown = 35$

3. $11 + 19 = \blacklozenge$

$\blacklozenge = 30$

4. $285 = 19 \times \triangle$

$\triangle = 15$

5. $11 = 6 + \sphericalangle$

$\sphericalangle = 5$

6. $10 \times 17 = \emptyset$

$\emptyset = 170$

7. $\clubsuit \div 3 = 2$

$\clubsuit = 6$

8. $\# - 4 = 13$

$\# = 17$

9. $\diamond = 1 + 19$

$\diamond = 20$

10. $\heartsuit = 300 \div 20$

$\heartsuit = 15$

11. $\cup = 19 \times 11$

$\cup = 209$

12. $14 + \oplus = 16$

$\oplus = 2$

13. $3 = 17 - \odot$

$\odot = 14$

14. $\bullet - 5 = 2$

$\bullet = 7$

15. $2 \times \dagger = 38$

$\dagger = 19$

16. $\blacksquare + 15 = 30$

$\blacksquare = 15$

17. $31 - 13 = \spadesuit$

$\spadesuit = 18$

18. $238 = \xi \times 17$

$\xi = 14$

19. $13 = 21 - \star$

$\star = 8$

20. $\natural \div 5 = 11$

$\natural = 55$

Unknown Symbols in Equations (H)

Name: _____

Date: _____

Determine the value of each symbol.

1. $11 = \heartsuit - 16$

2. $4 = \emptyset + 1$

3. $12 = 14 - \clubsuit$

4. $\oplus = 6 \div 2$

5. $4 \times \blacksquare = 28$

6. $32 \div \spadesuit = 4$

7. $170 = \diamondsuit \times 17$

8. $32 - \triangle = 12$

9. $\# \div 19 = 4$

10. $\blacktriangledown = 14 - 6$

11. $27 - 13 = \odot$

12. $3 = \dagger \div 13$

13. $8 + \wp = 9$

14. $26 - 14 = \otimes$

15. $11 + 15 = \bullet$

16. $15 - \spadesuit = 2$

17. $\S + 15 = 27$

18. $\blacklozenge = 7 \times 19$

19. $18 + 4 = \star$

20. $11 = \sphericalangle - 2$

Unknown Symbols in Equations (H) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $11 = \heartsuit - 16$

$\heartsuit = 27$

2. $4 = \emptyset + 1$

$\emptyset = 3$

3. $12 = 14 - \clubsuit$

$\clubsuit = 2$

4. $\oplus = 6 \div 2$

$\oplus = 3$

5. $4 \times \blacksquare = 28$

$\blacksquare = 7$

6. $32 \div \spadesuit = 4$

$\spadesuit = 8$

7. $170 = \diamondsuit \times 17$

$\diamondsuit = 10$

8. $32 - \triangle = 12$

$\triangle = 20$

9. $\# \div 19 = 4$

$\# = 76$

10. $\blacktriangledown = 14 - 6$

$\blacktriangledown = 8$

11. $27 - 13 = \odot$

$\odot = 14$

12. $3 = \dagger \div 13$

$\dagger = 39$

13. $8 + \cup = 9$

$\cup = 1$

14. $26 - 14 = \otimes$

$\otimes = 12$

15. $11 + 15 = \bullet$

$\bullet = 26$

16. $15 - \spadesuit = 2$

$\spadesuit = 13$

17. $\S + 15 = 27$

$\S = 12$

18. $\blacklozenge = 7 \times 19$

$\blacklozenge = 133$

19. $18 + 4 = \star$

$\star = 22$

20. $11 = \sphericalangle - 2$

$\sphericalangle = 13$

Unknown Symbols in Equations (I)

Name: _____

Date: _____

Determine the value of each symbol.

1. $36 = \diamond \times 2$

2. $19 + \triangle = 25$

3. $\cup \times 16 = 160$

4. $38 - \heartsuit = 19$

5. $20 \times \emptyset = 20$

6. $190 = 10 \times \sphericalangle$

7. $17 + \# = 37$

8. $\clubsuit - 15 = 8$

9. $4 = 60 \div \S$

10. $12 = \otimes - 9$

11. $34 \div 2 = \bullet$

12. $4 \times 15 = \star$

13. $5 = 18 - \dagger$

14. $24 - 17 = \blacksquare$

15. $9 = 162 \div \oplus$

16. $13 \div \spadesuit = 13$

17. $\natural \times 16 = 128$

18. $33 = 19 + \odot$

19. $20 - \blacktriangledown = 4$

20. $1 = 16 - \blacklozenge$

Unknown Symbols in Equations (I) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $36 = \diamond \times 2$

$\diamond = 18$

2. $19 + \triangle = 25$

$\triangle = 6$

3. $\cup \times 16 = 160$

$\cup = 10$

4. $38 - \heartsuit = 19$

$\heartsuit = 19$

5. $20 \times \emptyset = 20$

$\emptyset = 1$

6. $190 = 10 \times \sphericalangle$

$\sphericalangle = 19$

7. $17 + \# = 37$

$\# = 20$

8. $\clubsuit - 15 = 8$

$\clubsuit = 23$

9. $4 = 60 \div \S$

$\S = 15$

10. $12 = \otimes - 9$

$\otimes = 21$

11. $34 \div 2 = \bullet$

$\bullet = 17$

12. $4 \times 15 = \star$

$\star = 60$

13. $5 = 18 - \dagger$

$\dagger = 13$

14. $24 - 17 = \blacksquare$

$\blacksquare = 7$

15. $9 = 162 \div \oplus$

$\oplus = 18$

16. $13 \div \spadesuit = 13$

$\spadesuit = 1$

17. $\natural \times 16 = 128$

$\natural = 8$

18. $33 = 19 + \odot$

$\odot = 14$

19. $20 - \blacktriangledown = 4$

$\blacktriangledown = 16$

20. $1 = 16 - \blacklozenge$

$\blacklozenge = 15$

Unknown Symbols in Equations (J)

Name: _____

Date: _____

Determine the value of each symbol.

1. $\bullet = 35 - 18$

2. $\star \div 12 = 9$

3. $\emptyset = 26 - 16$

4. $272 = 17 \times \cup$

5. $9 = \blacklozenge + 8$

6. $\S \div 4 = 11$

7. $\otimes + 16 = 32$

8. $\spadesuit = 216 \div 12$

9. $\oplus = 19 - 15$

10. $\blacktriangledown = 8 \times 6$

11. $11 \times 4 = \clubsuit$

12. $4 \times 19 = \dagger$

13. $\blacklozenge = 12 \times 19$

14. $5 + 17 = \odot$

15. $36 = \sphericalangle \times 12$

16. $\heartsuit = 18 \times 16$

17. $\dagger = 9 - 8$

18. $64 = \blacksquare \times 4$

19. $56 \div 14 = \triangle$

20. $18 = \ddagger \times 2$

Unknown Symbols in Equations (J) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $\bullet = 35 - 18$

$\bullet = 17$

2. $\star \div 12 = 9$

$\star = 108$

3. $\emptyset = 26 - 16$

$\emptyset = 10$

4. $272 = 17 \times \cup$

$\cup = 16$

5. $9 = \blacklozenge + 8$

$\blacklozenge = 1$

6. $\S \div 4 = 11$

$\S = 44$

7. $\otimes + 16 = 32$

$\otimes = 16$

8. $\spadesuit = 216 \div 12$

$\spadesuit = 18$

9. $\oplus = 19 - 15$

$\oplus = 4$

10. $\blacktriangledown = 8 \times 6$

$\blacktriangledown = 48$

11. $11 \times 4 = \clubsuit$

$\clubsuit = 44$

12. $4 \times 19 = \dagger$

$\dagger = 76$

13. $\blacklozenge = 12 \times 19$

$\blacklozenge = 228$

14. $5 + 17 = \odot$

$\odot = 22$

15. $36 = \sphericalangle \times 12$

$\sphericalangle = 3$

16. $\heartsuit = 18 \times 16$

$\heartsuit = 288$

17. $\spadesuit = 9 - 8$

$\spadesuit = 1$

18. $64 = \blacksquare \times 4$

$\blacksquare = 16$

19. $56 \div 14 = \triangle$

$\triangle = 4$

20. $18 = \# \times 2$

$\# = 9$