

Unknown Symbols in Equations (A)

Name: _____

Date: _____

Determine the value of each symbol.

1. $7 = \odot + 1$

2. $8 \times 8 = \natural$

3. $\otimes \div 9 = 3$

4. $\# = 7 \times 8$

5. $\sphericalangle + 1 = 2$

6. $45 = \cup \times 9$

7. $11 = 2 + \emptyset$

8. $7 - \oplus = 2$

9. $\blacklozenge = 14 - 5$

10. $6 = 30 \div \blacksquare$

11. $9 = 2 + \dagger$

12. $\blacklozenge = 6 + 2$

13. $3 + 6 = \S$

14. $6 = 6 \times \star$

15. $13 - 5 = \heartsuit$

16. $10 = \bullet + 1$

17. $40 = \triangle \times 5$

18. $2 \times 4 = \clubsuit$

19. $\blacktriangledown + 7 = 13$

20. $8 \div \spadesuit = 1$

Unknown Symbols in Equations (A) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $7 = \odot + 1$

$\odot = 6$

2. $8 \times 8 = \natural$

$\natural = 64$

3. $\otimes \div 9 = 3$

$\otimes = 27$

4. $\# = 7 \times 8$

$\# = 56$

5. $\sphericalangle + 1 = 2$

$\sphericalangle = 1$

6. $45 = \mathbb{U} \times 9$

$\mathbb{U} = 5$

7. $11 = 2 + \emptyset$

$\emptyset = 9$

8. $7 - \oplus = 2$

$\oplus = 5$

9. $\blacklozenge = 14 - 5$

$\blacklozenge = 9$

10. $6 = 30 \div \blacksquare$

$\blacksquare = 5$

11. $9 = 2 + \dagger$

$\dagger = 7$

12. $\blacklozenge = 6 + 2$

$\blacklozenge = 8$

13. $3 + 6 = \S$

$\S = 9$

14. $6 = 6 \times \star$

$\star = 1$

15. $13 - 5 = \heartsuit$

$\heartsuit = 8$

16. $10 = \bullet + 1$

$\bullet = 9$

17. $40 = \triangle \times 5$

$\triangle = 8$

18. $2 \times 4 = \clubsuit$

$\clubsuit = 8$

19. $\blacktriangledown + 7 = 13$

$\blacktriangledown = 6$

20. $8 \div \spadesuit = 1$

$\spadesuit = 8$

Unknown Symbols in Equations (B)

Name: _____

Date: _____

Determine the value of each symbol.

1. $\otimes + 4 = 10$

2. $2 = 11 - \heartsuit$

3. $1 \times 2 = \blacksquare$

4. $63 \div 9 = \emptyset$

5. $\odot + 1 = 3$

6. $25 \div \clubsuit = 5$

7. $6 \times \triangle = 6$

8. $6 = \blacklozenge - 8$

9. $\cup \times 2 = 14$

10. $9 \div 9 = \#$

11. $\diamond + 7 = 9$

12. $\natural = 15 - 7$

13. $5 = 5 \times \sphericalangle$

14. $\bullet = 9 \times 2$

15. $\dagger = 2 \times 5$

16. $6 = 54 \div \blacktriangledown$

17. $7 \times 4 = \S$

18. $8 = \spadesuit + 2$

19. $\star + 9 = 11$

20. $\oplus + 4 = 11$

Unknown Symbols in Equations (B) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $\otimes + 4 = 10$

$\otimes = 6$

2. $2 = 11 - \heartsuit$

$\heartsuit = 9$

3. $1 \times 2 = \blacksquare$

$\blacksquare = 2$

4. $63 \div 9 = \emptyset$

$\emptyset = 7$

5. $\odot + 1 = 3$

$\odot = 2$

6. $25 \div \clubsuit = 5$

$\clubsuit = 5$

7. $6 \times \triangle = 6$

$\triangle = 1$

8. $6 = \blacklozenge - 8$

$\blacklozenge = 14$

9. $\cup \times 2 = 14$

$\cup = 7$

10. $9 \div 9 = \#$

$\# = 1$

11. $\diamond + 7 = 9$

$\diamond = 2$

12. $\spadesuit = 15 - 7$

$\spadesuit = 8$

13. $5 = 5 \times \sphericalangle$

$\sphericalangle = 1$

14. $\bullet = 9 \times 2$

$\bullet = 18$

15. $\dagger = 2 \times 5$

$\dagger = 10$

16. $6 = 54 \div \blacktriangledown$

$\blacktriangledown = 9$

17. $7 \times 4 = \S$

$\S = 28$

18. $8 = \spadesuit + 2$

$\spadesuit = 6$

19. $\star + 9 = 11$

$\star = 2$

20. $\oplus + 4 = 11$

$\oplus = 7$

Unknown Symbols in Equations (C)

Name: _____

Date: _____

Determine the value of each symbol.

1. ♠ = $5 - 1$

2. § = $3 \div 3$

3. $12 - 6 = \blacktriangledown$

4. $10 - 5 = \blacklozenge$

5. ♣ × 5 = 25

6. $\triangle - 6 = 6$

7. $\cup = 21 \div 3$

8. $8 \times \oplus = 64$

9. $7 + \# = 14$

10. $\dagger - 8 = 4$

11. $2 = \blacksquare + 1$

12. $6 = 4 + \heartsuit$

13. $11 = 9 + \blacklozenge$

14. $3 \times 5 = \bullet$

15. $1 = 4 - \star$

16. $\otimes - 5 = 7$

17. $\emptyset = 1 \times 2$

18. $15 - \odot = 9$

19. $72 \div \sphericalangle = 9$

20. $13 - \natural = 6$

Unknown Symbols in Equations (C) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. ♠ = 5 - 1

♠ = 4

2. § = 3 ÷ 3

§ = 1

3. 12 - 6 = ▼

▼ = 6

4. 10 - 5 = ◆

◆ = 5

5. ♣ × 5 = 25

♣ = 5

6. △ - 6 = 6

△ = 12

7. ∩ = 21 ÷ 3

∩ = 7

8. 8 × ⊕ = 64

⊕ = 8

9. 7 + ‡ = 14

‡ = 7

10. † - 8 = 4

† = 12

11. 2 = ■ + 1

■ = 1

12. 6 = 4 + ♥

♥ = 2

13. 11 = 9 + ◇

◇ = 2

14. 3 × 5 = ●

● = 15

15. 1 = 4 - ★

★ = 3

16. ⊗ - 5 = 7

⊗ = 12

17. ∅ = 1 × 2

∅ = 2

18. 15 - ⊙ = 9

⊙ = 6

19. 72 ÷ ∠ = 9

∠ = 8

20. 13 - † = 6

† = 7

Unknown Symbols in Equations (D)

Name: _____

Date: _____

Determine the value of each symbol.

1. $\clubsuit = 2 \times 7$

2. $\otimes + 9 = 11$

3. $11 - 2 = \triangle$

4. $12 = 6 \times \blacklozenge$

5. $\diamond = 6 \times 8$

6. $3 = \sphericalangle \div 1$

7. $\cup \div 5 = 7$

8. $2 = \oplus \times 1$

9. $3 + \emptyset = 6$

10. $\S \times 9 = 54$

11. $2 = \bullet - 9$

12. $4 = \odot \div 3$

13. $30 = 5 \times \blacktriangledown$

14. $1 \times 7 = \star$

15. $8 = \dagger \div 8$

16. $\blacksquare = 36 \div 4$

17. $2 = 1 \times \spadesuit$

18. $36 \div 9 = \heartsuit$

19. $\# + 7 = 12$

20. $8 = 24 \div \spadesuit$

Unknown Symbols in Equations (D) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $\clubsuit = 2 \times 7$

$\clubsuit = 14$

2. $\otimes + 9 = 11$

$\otimes = 2$

3. $11 - 2 = \triangle$

$\triangle = 9$

4. $12 = 6 \times \blacklozenge$

$\blacklozenge = 2$

5. $\blacklozenge = 6 \times 8$

$\blacklozenge = 48$

6. $3 = \sphericalangle \div 1$

$\sphericalangle = 3$

7. $\cup \div 5 = 7$

$\cup = 35$

8. $2 = \oplus \times 1$

$\oplus = 2$

9. $3 + \emptyset = 6$

$\emptyset = 3$

10. $\S \times 9 = 54$

$\S = 6$

11. $2 = \bullet - 9$

$\bullet = 11$

12. $4 = \odot \div 3$

$\odot = 12$

13. $30 = 5 \times \blacktriangledown$

$\blacktriangledown = 6$

14. $1 \times 7 = \star$

$\star = 7$

15. $8 = \dagger \div 8$

$\dagger = 64$

16. $\blacksquare = 36 \div 4$

$\blacksquare = 9$

17. $2 = 1 \times \spadesuit$

$\spadesuit = 2$

18. $36 \div 9 = \heartsuit$

$\heartsuit = 4$

19. $\sharp + 7 = 12$

$\sharp = 5$

20. $8 = 24 \div \spadesuit$

$\spadesuit = 3$

Unknown Symbols in Equations (E)

Name: _____

Date: _____

Determine the value of each symbol.

1. $12 = 8 + \oplus$

2. $15 - 6 = \blacktriangledown$

3. $3 = 4 - \diamond$

4. $\# \div 7 = 2$

5. $\S + 9 = 10$

6. $6 = \clubsuit - 3$

7. $24 \div 4 = \blacklozenge$

8. $\triangle - 9 = 2$

9. $9 = 3 + \blacksquare$

10. $11 - \Psi = 7$

11. $5 \times 5 = \dagger$

12. $1 = \emptyset - 5$

13. $4 \div \natural = 4$

14. $\odot = 9 + 7$

15. $1 = \spadesuit - 1$

16. $10 - \heartsuit = 6$

17. $4 = \star \div 7$

18. $3 - \sphericalangle = 1$

19. $5 - \otimes = 4$

20. $3 = \bullet \div 1$

Unknown Symbols in Equations (E) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $12 = 8 + \oplus$

$\oplus = 4$

2. $15 - 6 = \blacktriangledown$

$\blacktriangledown = 9$

3. $3 = 4 - \diamond$

$\diamond = 1$

4. $\# \div 7 = 2$

$\# = 14$

5. $\S + 9 = 10$

$\S = 1$

6. $6 = \clubsuit - 3$

$\clubsuit = 9$

7. $24 \div 4 = \blacklozenge$

$\blacklozenge = 6$

8. $\triangle - 9 = 2$

$\triangle = 11$

9. $9 = 3 + \blacksquare$

$\blacksquare = 6$

10. $11 - \upsideup = 7$

$\upsideup = 4$

11. $5 \times 5 = \dagger$

$\dagger = 25$

12. $1 = \emptyset - 5$

$\emptyset = 6$

13. $4 \div \natural = 4$

$\natural = 1$

14. $\odot = 9 + 7$

$\odot = 16$

15. $1 = \spadesuit - 1$

$\spadesuit = 2$

16. $10 - \heartsuit = 6$

$\heartsuit = 4$

17. $4 = \star \div 7$

$\star = 28$

18. $3 - \sphericalangle = 1$

$\sphericalangle = 2$

19. $5 - \otimes = 4$

$\otimes = 1$

20. $3 = \bullet \div 1$

$\bullet = 3$

Unknown Symbols in Equations (F)

Name: _____

Date: _____

Determine the value of each symbol.

1. $4 = 12 \div \blacksquare$

2. $12 = \triangle \times 6$

3. $\# = 7 - 6$

4. $3 = \odot + 1$

5. $\oplus = 4 \times 8$

6. $9 - 7 = \dagger$

7. $2 = 2 \times \cup$

8. $9 = 72 \div \blacklozenge$

9. $\blacktriangledown = 5 \times 2$

10. $8 = \heartsuit + 7$

11. $4 + \S = 6$

12. $27 \div \sphericalangle = 3$

13. $10 \div 2 = \otimes$

14. $\bullet \times 4 = 36$

15. $4 \times 3 = \diamond$

16. $\natural \times 7 = 56$

17. $3 = 6 \div \clubsuit$

18. $4 + 9 = \spadesuit$

19. $\star \div 2 = 1$

20. $\emptyset = 1 + 2$

Unknown Symbols in Equations (F) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $4 = 12 \div \blacksquare$

$\blacksquare = 3$

2. $12 = \triangle \times 6$

$\triangle = 2$

3. $\# = 7 - 6$

$\# = 1$

4. $3 = \odot + 1$

$\odot = 2$

5. $\oplus = 4 \times 8$

$\oplus = 32$

6. $9 - 7 = \dagger$

$\dagger = 2$

7. $2 = 2 \times \cup$

$\cup = 1$

8. $9 = 72 \div \blacklozenge$

$\blacklozenge = 8$

9. $\blacktriangledown = 5 \times 2$

$\blacktriangledown = 10$

10. $8 = \heartsuit + 7$

$\heartsuit = 1$

11. $4 + \xi = 6$

$\xi = 2$

12. $27 \div \sphericalangle = 3$

$\sphericalangle = 9$

13. $10 \div 2 = \otimes$

$\otimes = 5$

14. $\bullet \times 4 = 36$

$\bullet = 9$

15. $4 \times 3 = \diamond$

$\diamond = 12$

16. $\spadesuit \times 7 = 56$

$\spadesuit = 8$

17. $3 = 6 \div \clubsuit$

$\clubsuit = 2$

18. $4 + 9 = \heartsuit$

$\heartsuit = 13$

19. $\star \div 2 = 1$

$\star = 2$

20. $\emptyset = 1 + 2$

$\emptyset = 3$

Unknown Symbols in Equations (G)

Name: _____

Date: _____

Determine the value of each symbol.

1. $9 = \star - 1$

2. $\# = 9 \div 1$

3. $1 \times 4 = \emptyset$

4. $12 - \odot = 3$

5. $1 \times 9 = \otimes$

6. $\triangle \times 6 = 54$

7. $48 = 6 \times \spadesuit$

8. $2 + 8 = \clubsuit$

9. $12 = 2 \times \diamond$

10. $8 = \clubsuit \div 1$

11. $\blacklozenge = 4 + 2$

12. $48 \div 8 = \cup$

13. $24 \div 3 = \bullet$

14. $18 = 3 \times \sphericalangle$

15. $3 = 9 \div \heartsuit$

16. $18 \div 9 = \dagger$

17. $\blacksquare = 16 - 7$

18. $\S \times 6 = 48$

19. $11 = \oplus + 3$

20. $7 = 12 - \blacktriangledown$

Unknown Symbols in Equations (G) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $9 = \star - 1$

$\star = 10$

2. $\# = 9 \div 1$

$\# = 9$

3. $1 \times 4 = \emptyset$

$\emptyset = 4$

4. $12 - \odot = 3$

$\odot = 9$

5. $1 \times 9 = \otimes$

$\otimes = 9$

6. $\triangle \times 6 = 54$

$\triangle = 9$

7. $48 = 6 \times \spadesuit$

$\spadesuit = 8$

8. $2 + 8 = \clubsuit$

$\clubsuit = 10$

9. $12 = 2 \times \diamond$

$\diamond = 6$

10. $8 = \clubsuit \div 1$

$\clubsuit = 8$

11. $\blacklozenge = 4 + 2$

$\blacklozenge = 6$

12. $48 \div 8 = \cup$

$\cup = 6$

13. $24 \div 3 = \bullet$

$\bullet = 8$

14. $18 = 3 \times \sphericalangle$

$\sphericalangle = 6$

15. $3 = 9 \div \heartsuit$

$\heartsuit = 3$

16. $18 \div 9 = \dagger$

$\dagger = 2$

17. $\blacksquare = 16 - 7$

$\blacksquare = 9$

18. $\S \times 6 = 48$

$\S = 8$

19. $11 = \oplus + 3$

$\oplus = 8$

20. $7 = 12 - \blacktriangledown$

$\blacktriangledown = 5$

Unknown Symbols in Equations (H)

Name: _____

Date: _____

Determine the value of each symbol.

1. $3 = 8 - \bullet$

2. $\diamond \times 5 = 15$

3. $13 - 5 = \sphericalangle$

4. $25 = 5 \times \oplus$

5. $\natural = 5 + 9$

6. $\heartsuit = 4 + 9$

7. $25 = 5 \times \clubsuit$

8. $\dagger = 9 + 1$

9. $24 \div 3 = \sharp$

10. $6 = 48 \div \spadesuit$

11. $6 \times \blacktriangledown = 12$

12. $12 - 8 = \emptyset$

13. $7 + 2 = \star$

14. $\triangle \times 6 = 24$

15. $\otimes = 1 \times 8$

16. $16 \div \blacklozenge = 2$

17. $5 = \odot - 6$

18. $7 = 1 \times \blacksquare$

19. $3 = \S \div 9$

20. $\mathbb{U} = 14 - 9$

Unknown Symbols in Equations (H) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $3 = 8 - \bullet$

$\bullet = 5$

2. $\diamond \times 5 = 15$

$\diamond = 3$

3. $13 - 5 = \sphericalangle$

$\sphericalangle = 8$

4. $25 = 5 \times \oplus$

$\oplus = 5$

5. $\natural = 5 + 9$

$\natural = 14$

6. $\heartsuit = 4 + 9$

$\heartsuit = 13$

7. $25 = 5 \times \clubsuit$

$\clubsuit = 5$

8. $\dagger = 9 + 1$

$\dagger = 10$

9. $24 \div 3 = \sharp$

$\sharp = 8$

10. $6 = 48 \div \spadesuit$

$\spadesuit = 8$

11. $6 \times \blacktriangledown = 12$

$\blacktriangledown = 2$

12. $12 - 8 = \emptyset$

$\emptyset = 4$

13. $7 + 2 = \star$

$\star = 9$

14. $\triangle \times 6 = 24$

$\triangle = 4$

15. $\otimes = 1 \times 8$

$\otimes = 8$

16. $16 \div \blacklozenge = 2$

$\blacklozenge = 8$

17. $5 = \odot - 6$

$\odot = 11$

18. $7 = 1 \times \blacksquare$

$\blacksquare = 7$

19. $3 = \S \div 9$

$\S = 27$

20. $\mathbb{U} = 14 - 9$

$\mathbb{U} = 5$

Unknown Symbols in Equations (I)

Name: _____

Date: _____

Determine the value of each symbol.

1. $13 = \Psi + 8$

2. $35 = \blacktriangledown \times 5$

3. $81 \div \heartsuit = 9$

4. $30 = 6 \times \blacklozenge$

5. $\oplus - 6 = 3$

6. $\star = 3 \times 7$

7. $\clubsuit = 3 + 5$

8. $1 + 8 = \otimes$

9. $\emptyset = 3 + 8$

10. $12 - \spadesuit = 3$

11. $5 \times 3 = \diamond$

12. $\# = 5 + 7$

13. $1 = \spadesuit - 4$

14. $\bullet = 35 \div 5$

15. $7 = 9 - \sphericalangle$

16. $\odot = 13 - 7$

17. $\dagger \times 3 = 15$

18. $4 = \triangle + 1$

19. $\S \times 6 = 48$

20. $10 - \blacksquare = 6$

Unknown Symbols in Equations (I) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $13 = \Psi + 8$

$\Psi = 5$

2. $35 = \blacktriangledown \times 5$

$\blacktriangledown = 7$

3. $81 \div \heartsuit = 9$

$\heartsuit = 9$

4. $30 = 6 \times \blacklozenge$

$\blacklozenge = 5$

5. $\oplus - 6 = 3$

$\oplus = 9$

6. $\star = 3 \times 7$

$\star = 21$

7. $\clubsuit = 3 + 5$

$\clubsuit = 8$

8. $1 + 8 = \otimes$

$\otimes = 9$

9. $\emptyset = 3 + 8$

$\emptyset = 11$

10. $12 - \spadesuit = 3$

$\spadesuit = 9$

11. $5 \times 3 = \diamond$

$\diamond = 15$

12. $\# = 5 + 7$

$\# = 12$

13. $1 = \natural - 4$

$\natural = 5$

14. $\bullet = 35 \div 5$

$\bullet = 7$

15. $7 = 9 - \sphericalangle$

$\sphericalangle = 2$

16. $\odot = 13 - 7$

$\odot = 6$

17. $\dagger \times 3 = 15$

$\dagger = 5$

18. $4 = \triangle + 1$

$\triangle = 3$

19. $\S \times 6 = 48$

$\S = 8$

20. $10 - \blacksquare = 6$

$\blacksquare = 4$

Unknown Symbols in Equations (J)

Name: _____

Date: _____

Determine the value of each symbol.

1. $5 = 10 - \sphericalangle$

2. $\mathbb{U} = 5 \times 5$

3. $8 \times \triangle = 24$

4. $1 + \bullet = 4$

5. $5 = \diamond - 4$

6. $\clubsuit = 2 \times 8$

7. $9 - 3 = \spadesuit$

8. $8 + 6 = \otimes$

9. $\odot + 8 = 16$

10. $8 \div 1 = \blacktriangledown$

11. $1 \div 1 = \heartsuit$

12. $24 = 6 \times \blacklozenge$

13. $\emptyset = 7 \times 3$

14. $\oplus = 4 \times 3$

15. $7 = \star - 5$

16. $\natural = 11 - 7$

17. $11 - \blacksquare = 7$

18. $4 \times \S = 36$

19. $4 + 4 = \dagger$

20. $9 = \ddagger \times 1$

Unknown Symbols in Equations (J) Answers

Name: _____

Date: _____

Determine the value of each symbol.

1. $5 = 10 - \sphericalangle$

$\sphericalangle = 5$

2. $\mathbb{U} = 5 \times 5$

$\mathbb{U} = 25$

3. $8 \times \triangle = 24$

$\triangle = 3$

4. $1 + \bullet = 4$

$\bullet = 3$

5. $5 = \diamond - 4$

$\diamond = 9$

6. $\clubsuit = 2 \times 8$

$\clubsuit = 16$

7. $9 - 3 = \spadesuit$

$\spadesuit = 6$

8. $8 + 6 = \otimes$

$\otimes = 14$

9. $\odot + 8 = 16$

$\odot = 8$

10. $8 \div 1 = \blacktriangledown$

$\blacktriangledown = 8$

11. $1 \div 1 = \heartsuit$

$\heartsuit = 1$

12. $24 = 6 \times \blacklozenge$

$\blacklozenge = 4$

13. $\emptyset = 7 \times 3$

$\emptyset = 21$

14. $\oplus = 4 \times 3$

$\oplus = 12$

15. $7 = \star - 5$

$\star = 12$

16. $\natural = 11 - 7$

$\natural = 4$

17. $11 - \blacksquare = 7$

$\blacksquare = 4$

18. $4 \times \xi = 36$

$\xi = 9$

19. $4 + 4 = \dagger$

$\dagger = 8$

20. $9 = \sharp \times 1$

$\sharp = 9$