



Applying Properties of Operations

Name: _____

Apply the distributive property to produce an equivalent expression.

1) $3(10 + 5b)$

Answers

1. _____

2) $2(9 + 2c)$

2. _____

3) $4(2 + 3d)$

3. _____

4) $5(8 + 4e)$

4. _____

5) $f + f + f + f + f$

5. _____

6) $g + g + g + g + g + g + g + g + g$

6. _____

7) $36h + 12$

7. _____

8) $5 + 10i + 2i + 9$

8. _____

9) $48 + 12j$

9. _____

10) $3(3k + 8)$

10. _____

11) $6(7 + 2m)$

11. _____

12) $36n + 81$

12. _____

13) $2(8p + 3)$

13. _____

14) $3(4r + 4)$

14. _____

15) $90t + 40$

15. _____

16) $60u + 70$

16. _____

17) $72 + 72v$

17. _____

18) $56w + 21$

18. _____

19) $70y + 63$

19. _____

20) $6 + 8 + 3z + 3z$

20. _____



Applying Properties of Operations

Name: **Answer Key****Apply the distributive property to produce an equivalent expression.**

1) $3(10 + 5b)$

Answers

1. **$30 + 15b$**

2) $2(9 + 2c)$

2. **$18 + 4c$**

3) $4(2 + 3d)$

3. **$8 + 12d$**

4) $5(8 + 4e)$

4. **$40 + 20e$**

5) $f + f + f + f + f$

5. **$5f$**

6) $g + g + g + g + g + g + g + g + g$

6. **$9g$**

7) $36h + 12$

7. **$12(3h + 1)$**

8) $5 + 10i + 2i + 9$

8. **$12i+14$**

9) $48 + 12j$

9. **$12(4 + 1j)$**

10) $3(3k + 8)$

10. **$9k + 24$**

11) $6(7 + 2m)$

11. **$42 + 12m$**

12) $36n + 81$

12. **$9(4n + 9)$**

13) $2(8p + 3)$

13. **$16p + 6$**

14) $3(4r + 4)$

14. **$12r + 12$**

15) $90t + 40$

15. **$10(9t + 4)$**

16) $60u + 70$

16. **$10(6u + 7)$**

17) $72 + 72v$

17. **$72(1 + 1v)$**

18) $56w + 21$

18. **$7(8w + 3)$**

19) $70y + 63$

19. **$7(10y + 9)$**

20) $6 + 8 + 3z + 3z$

20. **$6z+14$**



Applying Properties of Operations

Name: _____

Apply the distributive property to produce an equivalent expression.

1) $5b + 8 + 9 + 2b$

1. _____

2) $5c + 8c + 7 + 4$

2. _____

3) $8(8d + 4)$

3. _____

4) $e + e + e + e + e$

4. _____

5) $12f + 20$

5. _____

6) $24g + 24$

6. _____

7) $12 + 16h$

7. _____

8) $20 + 8i$

8. _____

9) $15j + 24$

9. _____

10) $8k + 4$

10. _____

11) $10 + 4m$

11. _____

12) $7(9 + 10n)$

12. _____

13) $p + p + p + p + p + p + p$

13. _____

14) $12 + 14r$

14. _____

15) $2(4 + 5t)$

15. _____

16) $7u + 7 + 5 + 2u$

16. _____

17) $24 + 24v$

17. _____

18) $35w + 35$

18. _____

19) $70y + 21$

19. _____

20) $42z + 49$

20. _____

Answers



Apply the distributive property to produce an equivalent expression.

1) $5b + 8 + 9 + 2b$

Answers

1. **7b+17**

2) $5c + 8c + 7 + 4$

2. **13c+11**

3) $8(8d + 4)$

3. **64d + 32**

4) $e + e + e + e + e$

4. **5e**

5) $12f + 20$

5. **4(3f + 5)**

6) $24g + 24$

6. **24(1g + 1)**

7) $12 + 16h$

7. **4(3 + 4h)**

8) $20 + 8i$

8. **4(5 + 2i)**

9) $15j + 24$

9. **3(5j + 8)**

10) $8k + 4$

10. **4(2k + 1)**

11) $10 + 4m$

11. **2(5 + 2m)**

12) $7(9 + 10n)$

12. **63 + 70n**

13) $p + p + p + p + p + p + p$

13. **7p**

14) $12 + 14r$

14. **2(6 + 7r)**

15) $2(4 + 5t)$

15. **8 + 10t**

16) $7u + 7 + 5 + 2u$

16. **9u+12**

17) $24 + 24v$

17. **24(1 + 1v)**

18) $35w + 35$

18. **35(1w + 1)**

19) $70y + 21$

19. **7(10y + 3)**

20) $42z + 49$

20. **7(6z + 7)**



Applying Properties of Operations

Name: _____

Apply the distributive property to produce an equivalent expression.

1) $10(7 + 7b)$

Answers

1. _____

2) $c + c + c + c + c + c$

2. _____

3) $18d + 9$

3. _____

4) $e + e + e + e + e + e + e + e$

4. _____

5) $3 + 3f + 3 + 6f$

5. _____

6) $g + g + g + g + g + g + g + g + g$

6. _____

7) $6(4 + 7h)$

7. _____

8) $60i + 90$

8. _____

9) $j + j + j + j + j + j$

9. _____

10) $k + k + k + k + k + k + k$

10. _____

11) $9 + 15m$

11. _____

12) $n + n + n + n + n$

12. _____

13) $45 + 72p$

13. _____

14) $4r + 3 + 8r + 5$

14. _____

15) $56 + 72t$

15. _____

16) $7(3u + 5)$

16. _____

17) $v + v + v + v + v + v + v + v$

17. _____

18) $3(5w + 8)$

18. _____

19) $7 + 3 + 7y + 8y$

19. _____

20) $6 + 7 + 4z + 6z$

20. _____



Applying Properties of Operations

Name: **Answer Key****Apply the distributive property to produce an equivalent expression.**

1) $10(7 + 7b)$

Answers

1. **$70 + 70b$**

2) $c + c + c + c + c + c$

2. **$6c$**

3) $18d + 9$

3. **$9(2d + 1)$**

4) $e + e + e + e + e + e + e + e$

4. **$9e$**

5) $3 + 3f + 3 + 6f$

5. **$9f+6$**

6) $g + g + g + g + g + g + g + g + g$

6. **$9g$**

7) $6(4 + 7h)$

7. **$24 + 42h$**

8) $60i + 90$

8. **$30(2i + 3)$**

9) $j + j + j + j + j + j$

9. **$6j$**

10) $k + k + k + k + k + k + k$

10. **$7k$**

11) $9 + 15m$

11. **$3(3 + 5m)$**

12) $n + n + n + n + n$

12. **$5n$**

13) $45 + 72p$

13. **$9(5 + 8p)$**

14) $4r + 3 + 8r + 5$

14. **$12r+8$**

15) $56 + 72t$

15. **$8(7 + 9t)$**

16) $7(3u + 5)$

16. **$21u + 35$**

17) $v + v + v + v + v + v + v + v$

17. **$8v$**

18) $3(5w + 8)$

18. **$15w + 24$**

19) $7 + 3 + 7y + 8y$

19. **$15y+10$**

20) $6 + 7 + 4z + 6z$

20. **$10z+13$**



Applying Properties of Operations

Name: _____

Apply the distributive property to produce an equivalent expression.

1) $3(4 + 2b)$

Answers

1. _____

2) $30c + 20$

2. _____

3) $8(7d + 2)$

3. _____

4) $20e + 16$

4. _____

5) $6(7f + 7)$

5. _____

6) $g + g + g + g + g$

6. _____

7) $2(6h + 5)$

7. _____

8) $60 + 42i$

8. _____

9) $36 + 28j$

9. _____

10) $k + k + k + k + k + k + k$

10. _____

11) $4(3 + 8m)$

11. _____

12) $4(8n + 7)$

12. _____

13) $2p + 8p + 3 + 9$

13. _____

14) $20r + 10$

14. _____

15) $8(6t + 9)$

15. _____

16) $u + u + u + u + u + u$

16. _____

17) $2(6v + 4)$

17. _____

18) $54w + 42$

18. _____

19) $y + y + y + y + y + y + y$

19. _____

20) $8(5z + 10)$

20. _____



Applying Properties of Operations

Name: **Answer Key**

Apply the distributive property to produce an equivalent expression.

1) $3(4 + 2b)$

Answers

1. **12 + 6b**

2) $30c + 20$

2. **10(3c + 2)**

3) $8(7d + 2)$

3. **56d + 16**

4) $20e + 16$

4. **4(5e + 4)**

5) $6(7f + 7)$

5. **42f + 42**

6) $g + g + g + g + g$

6. **5g**

7) $2(6h + 5)$

7. **12h + 10**

8) $60 + 42i$

8. **6(10 + 7i)**

9) $36 + 28j$

9. **4(9 + 7j)**

10) $k + k + k + k + k + k + k$

10. **7k**

11) $4(3 + 8m)$

11. **12 + 32m**

12) $4(8n + 7)$

12. **32n + 28**

13) $2p + 8p + 3 + 9$

13. **10p+12**

14) $20r + 10$

14. **10(2r + 1)**

15) $8(6t + 9)$

15. **48t + 72**

16) $u + u + u + u + u + u$

16. **6u**

17) $2(6v + 4)$

17. **12v + 8**

18) $54w + 42$

18. **6(9w + 7)**

19) $y + y + y + y + y + y + y$

19. **7y**

20) $8(5z + 10)$

20. **40z + 80**



Applying Properties of Operations

Name: _____

Apply the distributive property to produce an equivalent expression.

1) $7b + 4b + 9 + 3$

Answers

1. _____

2) $3c + 8 + 5 + 7c$

2. _____

3) $30d + 24$

3. _____

4) $12 + 10e$

4. _____

5) $f + f + f + f$

5. _____

6) $2(3 + 5g)$

6. _____

7) $18 + 12h$

7. _____

8) $28 + 63i$

8. _____

9) $5(6j + 8)$

9. _____

10) $k + k + k + k + k + k + k + k + k$

10. _____

11) $m + m + m + m$

11. _____

12) $90 + 100n$

12. _____

13) $30p + 30$

13. _____

14) $8 + 8r + 7r + 2$

14. _____

15) $54 + 18t$

15. _____

16) $3 + 3u + 9u + 6$

16. _____

17) $5(8 + 6v)$

17. _____

18) $w + w + w + w$

18. _____

19) $6y + 9y + 10 + 7$

19. _____

20) $10 + 20z$

20. _____



Applying Properties of Operations

Name: **Answer Key**

Apply the distributive property to produce an equivalent expression.

1) $7b + 4b + 9 + 3$

Answers

1. **11b+12**

2) $3c + 8 + 5 + 7c$

2. **10c+13**

3) $30d + 24$

3. **6(5d + 4)**

4) $12 + 10e$

4. **2(6 + 5e)**

5) $f + f + f + f$

5. **4f**

6) $2(3 + 5g)$

6. **6 + 10g**

7) $18 + 12h$

7. **6(3 + 2h)**

8) $28 + 63i$

8. **7(4 + 9i)**

9) $5(6j + 8)$

9. **30j + 40**

10) $k + k + k + k + k + k + k + k + k$

10. **9k**

11) $m + m + m + m$

11. **4m**

12) $90 + 100n$

12. **10(9 + 10n)**

13) $30p + 30$

13. **30(1p + 1)**

14) $8 + 8r + 7r + 2$

14. **15r+10**

15) $54 + 18t$

15. **18(3 + 1t)**

16) $3 + 3u + 9u + 6$

16. **12u+9**

17) $5(8 + 6v)$

17. **40 + 30v**

18) $w + w + w + w$

18. **4w**

19) $6y + 9y + 10 + 7$

19. **15y+17**

20) $10 + 20z$

20. **10(1 + 2z)**



Applying Properties of Operations

Name: _____

Apply the distributive property to produce an equivalent expression.

1) $30b + 24$

Answers

1. _____

2) $5 + 5 + 9c + 10c$

2. _____

3) $10 + 16d$

3. _____

4) $9 + 2e + 8 + 7e$

4. _____

5) $24f + 48$

5. _____

6) $g + g + g + g + g + g + g + g + g$

6. _____

7) $8 + 7h + 8 + 7h$

7. _____

8) $90i + 80$

8. _____

9) $6(8 + 7j)$

9. _____

10) $10 + 9k + 7k + 2$

10. _____

11) $6 + 8m + 8 + 6m$

11. _____

12) $5n + 5 + 4n + 3$

12. _____

13) $6(4p + 7)$

13. _____

14) $4(4r + 10)$

14. _____

15) $5(6t + 5)$

15. _____

16) $2(4u + 6)$

16. _____

17) $10(7v + 4)$

17. _____

18) $2(10w + 7)$

18. _____

19) $4(5 + 7y)$

19. _____

20) $2z + 2z + 2 + 5$

20. _____



Applying Properties of Operations

Name: **Answer Key**

Apply the distributive property to produce an equivalent expression.

1) $30b + 24$

Answers

1. **6(5b + 4)**

2) $5 + 5 + 9c + 10c$

2. **19c+10**

3) $10 + 16d$

3. **2(5 + 8d)**

4) $9 + 2e + 8 + 7e$

4. **9e+17**

5) $24f + 48$

5. **24(1f + 2)**

6) $g + g + g + g + g + g + g + g + g$

6. **9g**

7) $8 + 7h + 8 + 7h$

7. **14h+16**

8) $90i + 80$

8. **10(9i + 8)**

9) $6(8 + 7j)$

9. **48 + 42j**

10) $10 + 9k + 7k + 2$

10. **16k+12**

11) $6 + 8m + 8 + 6m$

11. **14m+14**

12) $5n + 5 + 4n + 3$

12. **9n+8**

13) $6(4p + 7)$

13. **24p + 42**

14) $4(4r + 10)$

14. **16r + 40**

15) $5(6t + 5)$

15. **30t + 25**

16) $2(4u + 6)$

16. **8u + 12**

17) $10(7v + 4)$

17. **70v + 40**

18) $2(10w + 7)$

18. **20w + 14**

19) $4(5 + 7y)$

19. **20 + 28y**

20) $2z + 2z + 2 + 5$

20. **4z+7**



Applying Properties of Operations

Name: _____

Apply the distributive property to produce an equivalent expression.

1) $6(3b + 3)$

Answers

1. _____

2) $c + c + c$

2. _____

3) $12 + 20d$

3. _____

4) $8 + 7e + 5 + 8e$

4. _____

5) $6 + 8f$

5. _____

6) $g + g + g + g + g + g + g + g + g$

6. _____

7) $h + h + h + h + h + h + h + h$

7. _____

8) $9(3i + 2)$

8. _____

9) $9(6 + 4j)$

9. _____

10) $k + k + k + k + k + k$

10. _____

11) $m + m + m$

11. _____

12) $4n + 7n + 9 + 10$

12. _____

13) $3(5 + 4p)$

13. _____

14) $20 + 16r$

14. _____

15) $6(3t + 3)$

15. _____

16) $60 + 18u$

16. _____

17) $3(7v + 5)$

17. _____

18) $54 + 36w$

18. _____

19) $48y + 12$

19. _____

20) $z + z + z + z + z + z$

20. _____



Applying Properties of Operations

Name: **Answer Key**

Apply the distributive property to produce an equivalent expression.

1) $6(3b + 3)$

Answers

1. **$18b + 18$**

2) $c + c + c$

2. **$3c$**

3) $12 + 20d$

3. **$4(3 + 5d)$**

4) $8 + 7e + 5 + 8e$

4. **$15e+13$**

5) $6 + 8f$

5. **$2(3 + 4f)$**

6) $g + g + g + g + g + g + g + g + g$

6. **$9g$**

7) $h + h + h + h + h + h + h$

7. **$7h$**

8) $9(3i + 2)$

8. **$27i + 18$**

9) $9(6 + 4j)$

9. **$54 + 36j$**

10) $k + k + k + k + k + k$

10. **$6k$**

11) $m + m + m$

11. **$3m$**

12) $4n + 7n + 9 + 10$

12. **$11n+19$**

13) $3(5 + 4p)$

13. **$15 + 12p$**

14) $20 + 16r$

14. **$4(5 + 4r)$**

15) $6(3t + 3)$

15. **$18t + 18$**

16) $60 + 18u$

16. **$6(10 + 3u)$**

17) $3(7v + 5)$

17. **$21v + 15$**

18) $54 + 36w$

18. **$18(3 + 2w)$**

19) $48y + 12$

19. **$12(4y + 1)$**

20) $z + z + z + z + z + z$

20. **$6z$**



Applying Properties of Operations

Name: _____

Apply the distributive property to produce an equivalent expression.

1) $10b + 7 + 3b + 5$

Answers

1. _____

2) $c + c + c + c + c + c + c$

2. _____

3) $d + d + d + d + d + d + d$

3. _____

4) $e + e + e + e + e + e$

4. _____

5) $9 + 4f + 5 + 4f$

5. _____

6) $7 + 8 + 9g + 9g$

6. _____

7) $90h + 80$

7. _____

8) $8(10i + 2)$

8. _____

9) $27 + 36j$

9. _____

10) $2 + 4k + 8k + 2$

10. _____

11) $27m + 72$

11. _____

12) $2(7n + 2)$

12. _____

13) $p + p + p + p + p + p + p + p$

13. _____

14) $9(7r + 5)$

14. _____

15) $18 + 18t$

15. _____

16) $5u + 9 + 8u + 8$

16. _____

17) $4(4v + 5)$

17. _____

18) $7 + 8 + 6w + 7w$

18. _____

19) $9y + 4 + 6y + 10$

19. _____

20) $2(10z + 4)$

20. _____



Apply the distributive property to produce an equivalent expression.

1) $10b + 7 + 3b + 5$

Answers

1. **$13b+12$**

2) $c + c + c + c + c + c + c$

$7c$

3) $d + d + d + d + d + d + d$

$7d$

4) $e + e + e + e + e + e$

$6e$

5) $9 + 4f + 5 + 4f$

$8f+14$

6) $7 + 8 + 9g + 9g$

$18g+15$

7) $90h + 80$

$10(9h + 8)$

8) $8(10i + 2)$

$80i + 16$

9) $27 + 36j$

$9(3 + 4j)$

10) $2 + 4k + 8k + 2$

$12k+4$

11) $27m + 72$

$9(3m + 8)$

12) $2(7n + 2)$

$14n + 4$

13) $p + p + p + p + p + p + p + p$

$8p$

14) $9(7r + 5)$

$63r + 45$

15) $18 + 18t$

$18(1 + 1t)$

16) $5u + 9 + 8u + 8$

$13u+17$

17) $4(4v + 5)$

$16v + 20$

18) $7 + 8 + 6w + 7w$

$13w+15$

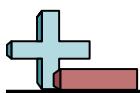
19) $9y + 4 + 6y + 10$

$15y+14$

20) $2(10z + 4)$

$20z + 8$

1-10	95	90	85	80	75	70	65	60	55	50
11-20	45	40	35	30	25	20	15	10	5	0



Applying Properties of Operations

Name: _____

Apply the distributive property to produce an equivalent expression.

Answers

1) $8 + 6b$

1. _____

2) $c + c + c + c + c + c$

2. _____

3) $d + d + d + d + d + d + d$

3. _____

4) $63 + 27e$

4. _____

5) $f + f + f + f + f + f + f$

5. _____

6) $60 + 90g$

6. _____

7) $9h + 5h + 2 + 9$

7. _____

8) $20 + 50i$

8. _____

9) $9(4 + 10j)$

9. _____

10) $k + k + k + k + k + k + k + k + k$

10. _____

11) $2 + 9 + 5m + 3m$

11. _____

12) $9(7n + 8)$

12. _____

13) $10(2p + 6)$

13. _____

14) $18r + 63$

14. _____

15) $t + t + t + t + t + t + t + t + t$

15. _____

16) $54u + 42$

16. _____

17) $60v + 18$

17. _____

18) $w + w + w + w + w + w + w + w$

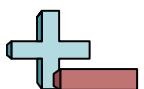
18. _____

19) $y + y + y + y + y + y + y + y$

19. _____

20) $30z + 21$

20. _____



Applying Properties of Operations

Name: **Answer Key**

Apply the distributive property to produce an equivalent expression.

1) $8 + 6b$

Answers

1. $2(4 + 3b)$

2) $c + c + c + c + c + c$

2. $6c$

3) $d + d + d + d + d + d + d$

3. $7d$

4) $63 + 27e$

4. $9(7 + 3e)$

5) $f + f + f + f + f + f + f$

5. $7f$

6) $60 + 90g$

6. $30(2 + 3g)$

7) $9h + 5h + 2 + 9$

7. $14h + 11$

8) $20 + 50i$

8. $10(2 + 5i)$

9) $9(4 + 10j)$

9. $36 + 90j$

10) $k + k + k + k + k + k + k + k + k$

10. $9k$

11) $2 + 9 + 5m + 3m$

11. $8m + 11$

12) $9(7n + 8)$

12. $63n + 72$

13) $10(2p + 6)$

13. $20p + 60$

14) $18r + 63$

14. $9(2r + 7)$

15) $t + t + t + t + t + t + t + t + t$

15. $9t$

16) $54u + 42$

16. $6(9u + 7)$

17) $60v + 18$

17. $6(10v + 3)$

18) $w + w + w + w + w + w + w + w$

18. $8w$

19) $y + y + y + y + y + y + y + y$

19. $8y$

20) $30z + 21$

20. $3(10z + 7)$



Applying Properties of Operations

Name: _____

Apply the distributive property to produce an equivalent expression.

Answers

1) $36b + 63$

1. _____

2) $5(2 + 7c)$

2. _____

3) $2(7d + 3)$

3. _____

4) $4(6e + 7)$

4. _____

5) $f + f + f + f$

5. _____

6) $g + g + g + g + g + g$

6. _____

7) $9h + 7 + 7 + 8h$

7. _____

8) $3i + 9i + 5 + 10$

8. _____

9) $70j + 42$

9. _____

10) $8(9k + 5)$

10. _____

11) $m + m + m + m + m$

11. _____

12) $24 + 40n$

12. _____

13) $2(7p + 5)$

13. _____

14) $r + r + r + r + r$

14. _____

15) $3(9t + 3)$

15. _____

16) $27u + 72$

16. _____

17) $v + v + v + v + v + v + v$

17. _____

18) $54 + 54w$

18. _____

19) $8(5y + 2)$

19. _____

20) $21 + 24z$

20. _____



Applying Properties of Operations

Name: **Answer Key**

Apply the distributive property to produce an equivalent expression.

1) $36b + 63$

Answers

1. $9(4b + 7)$

2) $5(2 + 7c)$

2. $10 + 35c$

3) $2(7d + 3)$

3. $14d + 6$

4) $4(6e + 7)$

4. $24e + 28$

5) $f + f + f + f$

5. $4f$

6) $g + g + g + g + g + g$

6. $6g$

7) $9h + 7 + 7 + 8h$

7. $17h + 14$

8) $3i + 9i + 5 + 10$

8. $12i + 15$

9) $70j + 42$

9. $14(5j + 3)$

10) $8(9k + 5)$

10. $72k + 40$

11) $m + m + m + m + m$

11. $5m$

12) $24 + 40n$

12. $8(3 + 5n)$

13) $2(7p + 5)$

13. $14p + 10$

14) $r + r + r + r + r$

14. $5r$

15) $3(9t + 3)$

15. $27t + 9$

16) $27u + 72$

16. $9(3u + 8)$

17) $v + v + v + v + v + v + v$

17. $7v$

18) $54 + 54w$

18. $54(1 + 1w)$

19) $8(5y + 2)$

19. $40y + 16$

20) $21 + 24z$

20. $3(7 + 8z)$

1-10	95	90	85	80	75	70	65	60	55	50
11-20	45	40	35	30	25	20	15	10	5	0