

Equations

Skill 4 - 6G

Balance Equations

Answer to test question grade 4 skill 6G

$$8 = 2 \times 4$$

1. Multiply both sides of the equation by 3. \longrightarrow $8 \times 3 = (2 \times 4) \times 3$

$$24 = 8 \times 3$$

$$24 = 24$$

2. Divide both sides of the equation by 3. \longrightarrow $(7 + 5) \div 3 = (4 + 8) \div 3$

$$12 \div 3 = 12 \div 3$$

$$4 = 4$$

Did the values of the sides stay equal for both problems? **Answer:** yes

Directions: Follow the instructions by each problem below. Multiply both sides of the equation.

1. $3 = 3$ (multiply both sides by 2)

2. $5 = 5$ (multiply both sides by 3)

3. $4 = 4$ (multiply both sides by 5)

4. $2 = 2$ (multiply both sides by 4)

5. $8 = (2 \times 4)$ (multiply both sides by 2)

6. $10 = (2 \times 5)$ (multiply both sides by 3)

7. $4 = (2 \times 2)$ (multiply both sides by 3)

8. $16 = (8 \times 2)$ (multiply both sides by 2)

9. $9 = (3 \times 3)$ (multiply both sides by 2)

10. $12 = (2 \times 6)$ (multiply both sides by 3)

Equations

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Balance Equations $(7 + 5) = (4 + 8)$

$$(7 + 5) \div 3 = (4 + 8) \div 3$$

$$12 \div 3 = 12 \div 3$$

$$4 = 4$$

Directions: Follow the instructions by each problem below.

11. $(4 + 2) = (3 + 3)$ (multiply both sides by 2)

12. $(4 + 3) = (2 + 5)$ (multiply both sides by 2)

13. $(5 + 3) = (2 + 6)$ (multiply both sides by 2)

14. $(8 + 2) = (4 + 6)$ (multiply both sides by 2)

15. $(7 + 2) = (8 + 1)$ (multiply both sides by 2)

16. $(2 + 3) = (4 + 1)$ (multiply both sides by 3)

17. $(4 + 2) = (2 \times 3)$ (divide both sides by 2)

18. $(5 + 2) = (1 + 6)$ (multiply both sides by 2)

19. $(9 + 5) = (6 + 8)$ (multiply both sides by 2)

20. $(8 + 2) = (2 \times 5)$ (divide both sides by 2)

21. $14 = (2 \times 7)$ (divide both sides by 2)

22. $12 = (2 \times 6)$ (divide both sides by 3)

23. $(4 + 8) = (6 \times 2)$ (multiply both sides by 2)

24. $(4 + 6) = (2 \times 5)$ (multiply both sides by 2)

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Balance Equations

Directions: Follow the instructions by each problem below.

25. $(6 + 8) = (7 + 7)$ (multiply both sides by 2)

26. $(15 + 6) = (18 + 3)$ (multiply both sides by 2)

27. $(15 + 6) = (3 \times 7)$ (divide both sides by 7)

28. $24 = (12 \times 2)$ (divide both sides by 3)

29. $42 = (6 \times 7)$ (divide both sides by 2)

30. $14 = (2 \times 7)$ (multiply both sides by 2)

31. $12 = (2 \times 6)$ (divide both sides by 3)

32. $54 = (9 \times 6)$ (divide both sides by 3)

33. $36 = (12 \times 3)$ (divide both sides by 9)

34. $(8 + 4) = (6 + 6)$ (multiply both sides by 2)

35. $36 = (6 \times 6)$ (divide both sides by 3)

36. $56 = (7 \times 8)$ (divide both sides by 8)

37. $(2 \times 2) = (8 \div 2)$ (multiply both sides by 2)

38. $(4 \times 4) = (32 \div 2)$ (divide both sides by 2)

Answer Key
Skill 4-6G

- | | | | |
|--|---|---|--|
| 1. $3 \times 2 = 3 \times 2$
$6 = 6$ | 2. $5 \times 3 = 5 \times 3$
$15 = 15$ | 3. $4 \times 5 = 4 \times 5$
$20 = 20$ | 4. $2 \times 4 = 2 \times 4$
$8 = 8$ |
| 5. $8 \times 2 = (2 \times 4) \times 2$
$16 = 8 \times 2$
$16 = 16$ | 6. $10 \times 3 = (2 \times 5) \times 3$
$30 = 10 \times 3$
$30 = .30$ | 7. $4 \times 3 = (2 \times 2) \times 3$
$12 = 4 \times 3$
$12 = .12$ | 8. $16 \times 2 = (8 \times 2) \times 2$
$32 = 16 \times 2$
$32 = 32$ |
| 6. $10 \times 3 = (2 \times 5) \times 3$
$30 = 10 \times 3$
$30 = 30$ | 7. $4 \times 3 = ((2 \times 2) \times 3)$
$12 = 4 \times 3$
$12 = 12$ | 8. $16 \times 2 = (8 \times 2) \times 2$
$32 = 16 \times 2$
$32 = 32$ | 9. $9 \times 2 = (3 \times 3) \times 2$
$18 = 9 \times 2$
$18 = 18$ |
| 10. $12 \times 3 = (2 \times 6) \times 3$
$36 = 12 \times 3$
$36 = 36$ | 11. $(4 + 2) \times 2 = (3 + 3) \times 2$
$6 \times 2 = 6 \times 2$
$12 = 12$ | 12. $(4 + 3) \times 2 = (2 + 5) \times 2$
$7 \times 2 = 7 \times 2$
$14 = 14$ | |
| 13. $(5 + 3) \times 2 = (2 + 6) \times 2$
$8 \times 2 = 8 \times 2$
$16 = 16$ | 14. $(8 + 2) \times 2 = (4 + 6) \times 2$
$10 \times 2 = 10 \times 2$
$20 = 20$ | 15. $(7 + 2) \times 2 = (8 + 1) \times 2$
$9 \times 2 = 9 \times 2$
$18 = 18$ | |
| 16. $(2 + 3) \times 3 = (4 + 1) \times 3$
$5 \times 3 = 5 \times 3$
$15 = 15$ | 17. $(4 + 2) \div 2 = (2 \times 3) \div 2$
$6 \div 2 = 6 \div 2$
$3 = 3$ | 18. $(5 + 2) \times 2 = (1 + 6) \times 2$
$7 \times 2 = 7 \times 2$
$14 = 14$ | |
| 19. $(9 + 5) \times 2 = (6 + 8) \times 2$
$14 \times 2 = 14 \times 2$
$28 = 28$ | 20. $(8 + 2) \div 2 = (2 \times 5) \div 2$
$10 \div 2 = 10 \div 2$
$5 = 5$ | 21. $14 \div 2 = (2 \times 7) \div 2$
$7 = 14 \div 2$
$7 = 7$ | |
| 22. $12 \div 3 = (2 \times 6) \div 3$
$4 = 12 \div 3$
$4 = 4$ | 23. $(4 + 8) \times 2 = (6 \times 2) \times 2$
$12 \times 2 = 12 \times 2$
$24 = 24$ | 24. $(4 + 6) \times 2 = (2 \times 5) \times 2$
$10 \times 2 = 10 \times 2$
$20 = 20$ | |
| 25. $(6 + 8) \times 2 = (7 + 7) \times 2$
$14 \times 2 = 14 \times 2$
$28 = 28$ | 26. $(15 + 6) \times 2 = (18 + 3) \times 2$
$21 \times 2 = 21 \times 2$
$42 = 42$ | 27. $(15 + 6) \div 7 = (3 \times 7) \div 7$
$21 \div 7 = 21 \div 7$
$3 = 3$ | |
| 28. $24 \div 3 = (12 \times 2) \div 3$
$8 = 24 \div 3$
$8 = 8$ | 29. $42 \div 2 = (6 \times 7) \div 2$
$21 = 42 \div 2$
$21 = 21$ | 30. $14 \times 2 = (2 \times 7) \times 2$
$28 = 14 \times 2$
$28 = 28$ | |
| 31. $12 \div 3 = (2 \times 6) \div 3$
$4 = 12 \div 3$
$4 = 4$ | 32. $54 \div 3 = (9 \times 6) \div 3$
$18 = 54 \div 3$
$18 = 18$ | 33. $36 \div 9 = (12 \times 3) \div 9$
$4 = 36 \div 9$
$4 = 4$ | |
| 34. $(8 + 4) \times 2 = (6 + 6) \times 2$
$12 \times 2 = 12 \times 2$
$24 = 24$ | 35. $36 \div 3 = (6 \times 6) \div 3$
$12 = 36 \div 3$
$12 = 12$ | 36. $56 \div 8 = (7 \times 8) \div 8$
$7 = 56 \div 8$
$7 = 7$ | |
| 37. $(2 + 2) \times 2 = (8 \div 2) \times 2$
$4 \times 2 = 4 \times 2$
$8 = 8$ | 38. $(4 \times 4) \div 2 = (32 \div 2) \div 2$
$16 \div 2 = 16 \div 2$
$8 = 8$ | | |