

Monster Math Academy

Two-Step Equations • Dragons, Unicorns & Monsters Edition

Name: _____ Rank: Apprentice Wizard → Dragon Tamer → Grand Unicorn Sage

The Wizard's Rule: Undo it Backwards!

An equation is a balance scale. Whatever you do to one side, you must do to the other, or the scale tips and a grumpy troll shows up. To find a mystery number, **undo** the operations in **reverse order**: first undo the adding/subtracting, then undo the multiplying/dividing.

Example: **Ember** the dragon hoards gold. She has 3 sacks with the same number of coins in each, plus 7 loose coins under her wing. She has 25 coins total. How many coins are in each sack?

$$3g + 7 = 25$$

Step 1 — undo the +7: subtract 7 from both sides → $3g = 18$

Step 2 — undo the $\times 3$: divide both sides by 3 → $g = 6$

Check it! $3 \times 6 + 7 = 25$ ✓ **Ember** has 6 coins per sack.

Level 1: Apprentice Wizard — Solve for the mystery number. Show both steps!

1. **Gloop** the swamp monster's slime.

$$2x + 5 = 17$$

2. **Sparkle** the unicorn's horn glitter.

$$4u - 3 = 21$$

3. **Fangs** the vampire bat's midnight snacks.

$$5b + 9 = 44$$

4. **Scorch** the dragon's flame points.

$$3d - 8 = 19$$

5. Half of **Blizzard** the ice troll's snowballs.

$$x \div 2 + 4 = 10$$

6. **Zog** the six-eyed cyclops's eyeballs. Weird.

$$6z + 6 = 60$$

7. **Rumble** the rock giant's boulders.

$$7r - 14 = 35$$

8. A third of **Moonbeam**'s rainbow apples.

$$m \div 3 - 2 = 5$$

Level 2: Dragon Tamer — Monster Story Problems

Write the equation yourself, then solve it. Circle your answer and give it a unit (coins, cookies, teeth...).

9. **Sparkle** the unicorn packs 4 baskets of rainbow apples with the same number in each, plus 5 loose apples for the road. She has 33 apples in all. How many are in each basket?

Equation: _____

10. **Ember** the dragon **tripled** her gold hoard by raiding a castle, then spent 15 coins on marshmallows. Now she has 45 coins. How many did she start with?

Equation: _____

11. **Gloop** the monster sneaks the same number of cookies from each of 5 jars, then eats 12 more from the tin. He gobbled 47 cookies. How many from each jar?

Equation: _____

12. **Blizzard** the ice troll gives away **half** his snowballs, then finds 8 more. He now has 20. How many snowballs did he start with?

Equation: _____

Level 3: Grand Unicorn Sage — Boss Battles!

Only the bravest mathematicians dare enter. Hint: these need an extra trick before the two steps.

13. The mystery number is hiding on **both** sides! Get all the x's together first.

$$2x + 3 = x + 11$$

14. The dragon put parentheses around her hoard. Undo the $\times 3$ first (or distribute!).

$$3(m + 4) = 27$$

15. **Fangs** the bat is flying in the negatives! Careful.

$$4n + 20 = 8$$

16. **Zog** says the answer is a fraction. Is he right?

$$8c - 6 = 14$$

Super Bonus: Design-a-Monster Equation! Invent your own creature and write a two-step equation about it whose answer is your age. Trade with your partner and solve each other's. Example: *Wobble the jelly monster has 4 wobbly legs each with the same number of toes, plus 2 extra toes...*

My monster: _____ My equation: _____ Partner's answer: _____

Answer key (for the Grand Wizard only): 1) 6 2) 6 3) 7 4) 9 5) 12 6) 9 7) 7 8) 21 9) $4a + 5 = 33$, $a = 7$ 10) $3g - 15 = 45$, $g = 20$ 11) $5c + 12 = 47$, $c = 7$ 12) $s \div 2 + 8 = 20$, $s = 24$ 13) $x = 8$ 14) $m = 5$ 15) $n = -3$ 16) $c = 2.5$ (yes, **Zog** is right!)