HANDS-ON EQUATIONS®
VERBAL PROBLEMS
Introductory Workbook

By Henry Borenson, Ed.D.

Todd is 8 years older than his little sister Kate.
If the sum of their ages is 20, how old is each?

- Begin as early as the 3rd grade
- A graduated progression of 27 lessons
- Three examples per lesson
- Work template included with each example

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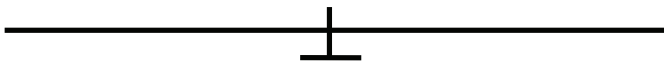
PART B: SOLUTIONS……. 1 - 29

Name: _____ Grade: ____ Date: _____

16. **Two boxes of pencils and three loose pencils yield a total of 13 pencils. How many pencils are in each box?**

Let ▲ be…

Setup (use scale at right)



Solution for setup: ▲ =

Answer in sentence format:

Check:

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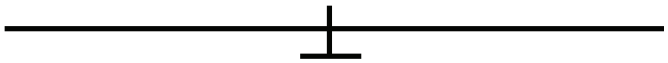
17. **Three sets of cards, each containing the same number of cards, were spread out and added to 5 loose cards, giving a total of 26 cards. How many cards were in each set?**

Let ▲ be…

Setup (use scale at right)



Solution for setup: ▲ =

Answer in sentence format:

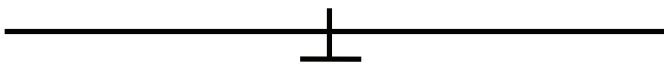
Check:

---

18. **Five packets of balloons and 4 loose balloons yield 59 balloons. How many balloons are in each packet?**

Let ▲ be

Setup (use scale at right)



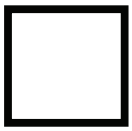
Solution for setup: ▲ =

Answer in sentence format:

Check:

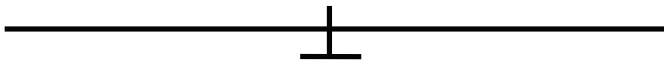
Name: _____ Grade: ____ Date: _____

58. **The side of a square is x. If the perimeter is 36 cm, how long is each side?**



Let the side of the square be 

Setup (use scale at right)



Solution for setup: 

Answer in sentence format:

Check:

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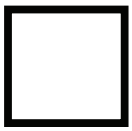
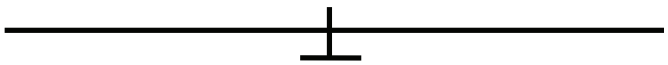
59. **The side of a square is 2x + 1. If the perimeter is 44, how much is x?**



Let the side of the square be …

Setup (use scale at right)



Solution for setup: 

Answer in sentence format:

Check:

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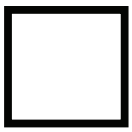
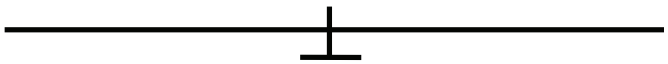
60. **The side of a square is 5x + 2. If the perimeter is 68, how much is x?**



Let the side of the square be…

Setup (use scale at right)



Solution for setup: 

Answer in sentence format:

Check:

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22. **Four times a number gives the same result as three times the same number, increased by 9. Find the number.**

Let ▲ be the number

Setup (use scale at right)

Solution for setup: ▲ = 9

Answer in sentence format: The number is 9.

Check: 36 ✓= 36

---

23. **Five times a number is the same as three times the same number, increased by 16. Find the number.**

Let ▲ be the number

Setup (use scale at right)

Solution for setup: ▲ = 8

Answer in sentence format: The number is 8.

Check: 40 ✓= 40

---

24. **If 6 is added to twice a number the result will be the same as four times the same number. Find the number.**

Let ▲ be the number

Setup (use scale at right)

Solution for setup: ▲ = 3

Answer in sentence format: The number is 3.

Check: 12 ✓= 12

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46. **Jim said, "If you take my age, double it, add 10, and then double the result, you get 52." Can you find Jim's age?**

Let ▲ be Jim's age

Setup (use scale at right)

Solution for setup: ▲ = 8

Answer in sentence format: Jim is 8 years old.

Check: 52 ✓= 52

---

47. **When his uncle asked Matthew to tell him his age, Mathew responded with a puzzle, "If you take my age, double it, add 6, and then double the answer, you get 48." Can you find Mathew's age?**

Let ▲ be Matthew's age

Setup (use scale at right)

Solution for setup: ▲ = 9

Answer in sentence format: Mathew is 9 years of age.

Check: 48 ✓= 48

---

48. **Three times a number, increased by 35, then doubled, is 100. Find the number.**

Let ▲ be the number

Setup (use scale at right)

Solution for setup: ▲ = 5

Answer in sentence format: The number is 5.

Check: 100 ✓= 100