Names (pair) _____ Date _____

Word Problems, Percentages and Proportion

Remember

1. Decide what x is. 2. Write the other quantities using x (a table helps). 3. Write an equation. 4. Solve it. 5. Check it in the story and answer in a sentence. Percentages: p % of a is $\frac{p}{100} \times a$.

1 IN PAIRS On a school trip there are 6 times as many students as teachers. Let s be the number of students and t the number of teachers. Which equation is right? Check with numbers, e.g. 3 teachers.

$6s = t$ or $s = 6t$ → ☐

2 ON YOUR OWN The sum of three consecutive whole numbers is 72. What are the numbers?

Equation: ☐ ☐

3 ON YOUR OWN A father is 4 times as old as his son. In 20 years he will be twice as old. How old is each of them? Complete the table.

	Now	In 20 years
Son	x	☐
Father	☐	☐

Equation: ☐ son ☐ father ☐

Names (pair) _____ Date _____

4 ON YOUR OWN **Percentages.** Write an equation and solve.

After a 20 % discount, trainers cost 64 €. What was the price before?

The price including 25 % VAT is 150 €. What is the price without VAT?

5 IN PAIRS **Proportion.**

4 kg of apples cost 6 €. How many kilograms do we get for 15 €?

4 workers finish a job in 6 days. How many days do 3 workers need?

Which of the two is inverse proportion? How do you know?

6 IN PAIRS Make up a word problem that is solved by the equation $2x + 5 = 25$.

★ ON YOUR OWN **Exit card.** A number increased by 15 % is 46. What is the number?