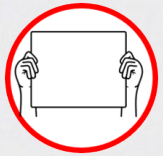
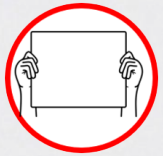


TRUE FALSE

When multiplying 0.25 × 0.4, the product will have three decimal places.

When multiplying 0.25×0.4, the product will have three decimal places.

False. 0.25 has 2 decimal places and 0.4 has 1 decimal place, so the product should have 2+1=3 decimal places. However, $0.25 \times 0.4 = 0.100$, which can be simplified to 0.1 (one decimal place) because trailing zeros after the decimal point can be dropped.



TRUE FALSE

Multiplying a decimal by 0.1 is equivalent to dividing that number by 10.

Multiplying a decimal by 0.1 is equivalent to dividing that number by 10.

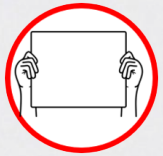
True. Multiplying by 0.1 moves the decimal point one place to the left, which is the same as dividing by 10.

TRUE FALSE

The product of 2.5 × 3.2 will be greater than 7.5.

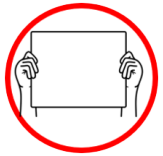
The product of 2.5 × 3.2 will be greater than 7.5.

True. 2.5 × 3.2 = 8.0, which is greater than 7.5. This demonstrates that multiplying decimals can result in products that are larger than the product of their whole number approximations.



TRUE FALSE

When multiplying decimals, you should always line up the decimal points before multiplying.



When multiplying decimals, you should always line up the decimal points before multiplying.

False. When multiplying decimals, you multiply the numbers as if they were whole numbers, then count the total decimal places in the factors to determine where to place the decimal point in the product.

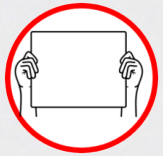
TRUE FALSE

$$0.75 \times 0.8 = 0.6$$

$$0.75 \times 0.8 = 0.6$$

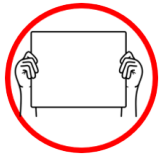
True. $0.75 \times 0.8 = 0.600$, which simplifies to 0.6.

This can be verified by converting to fractions: $3/4 \times 4/5 = 12/20 = 3/5 = 0.6$.



TRUE FALSE

Multiplying any number by a decimal less than 1 will always result in a smaller number.

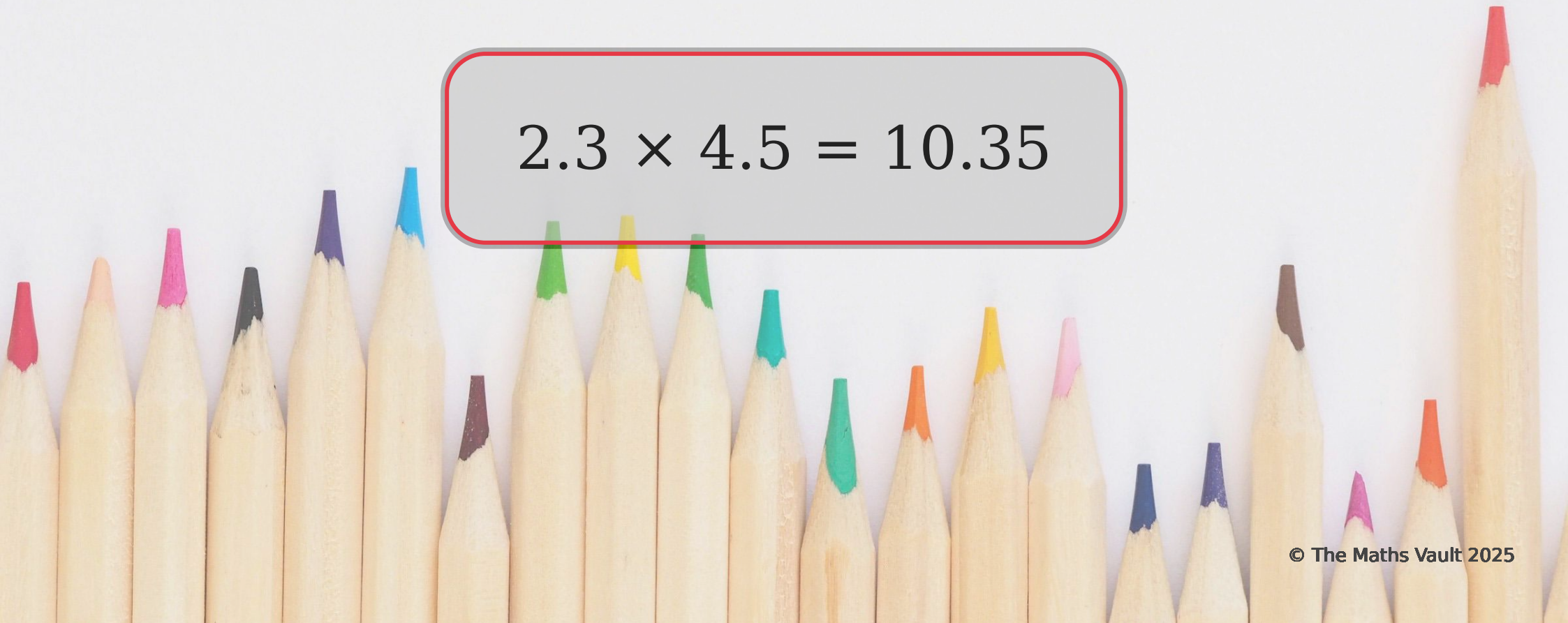


Multiplying any number by a decimal less than 1 will always result in a smaller number.

False. This is only true for positive numbers. When multiplying negative numbers by decimals less than 1, the result becomes larger (less negative).

TRUE FALSE

$$2.3 \times 4.5 = 10.35$$



$$2.3 \times 4.5 = 10.35$$

True. $23 \times 45 = 1035$, and since there are 2 decimal places total (one from each factor), the product is 10.35.

TRUE FALSE

When multiplying 1.25 × 0.08, you can ignore the decimal points, multiply 125 × 8 = 1000, then place the decimal point to get 10.00.

When multiplying 1.25 × 0.08, you can ignore the decimal points, multiply 125 × 8 = 1000, then place the decimal point to get 10.00.

False. 1.25 has 2 decimal places and 0.08 has 2 decimal places, so the product should have 4 decimal places. 125 × 8 = 1000, so the correct product is 0.1000, which simplifies to 0.1.

TRUE FALSE

The product of 0.6 × 0.7 is the same as 6/10 × 7/10.

The product of 0.6 × 0.7 is the same as 6/10 × 7/10.

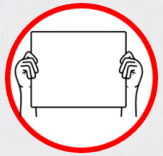
True. Both expressions represent the same mathematical operation: 0.6 × 0.7 = 0.42 and 6/10 × 7/10 = 42/100 = 0.42.

TRUE FALSE

If you multiply 4.8 by 2.5, the product will be exactly 12.

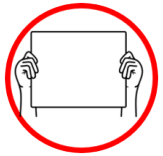
If you multiply 4.8 by 2.5, the product will be exactly 12.

True. 4.8 × 2.5 = 12.0, which is exactly 12. This shows that decimal multiplication can sometimes result in whole numbers.



TRUE FALSE

When multiplying decimals, the number of digits after the decimal point in the product is always equal to the sum of digits after the decimal points in the factors.

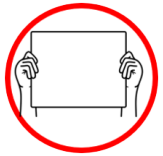


When multiplying decimals, the number of digits after the decimal point in the product is always equal to the sum of digits after the decimal points in the factors.

False. While this is generally true, sometimes the product may have trailing zeros that can be dropped, making the final number of decimal places appear smaller.

TRUE FALSE

$$0.9 \times 0.9 = 0.81$$



$$0.9 \times 0.9 = 0.81$$

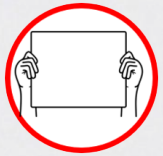
True. $0.9 \times 0.9 = 0.81$. This can be thought of as $9/10 \times 9/10 = 81/100 = 0.81$.

TRUE FALSE

Multiplying 7.2 by 0.5 gives the same result as dividing 7.2 by 2.

Multiplying 7.2 by 0.5 gives the same result as dividing 7.2 by 2.

True. Both operations yield 3.6. Multiplying by 0.5 is equivalent to dividing by 2.



TRUE FALSE

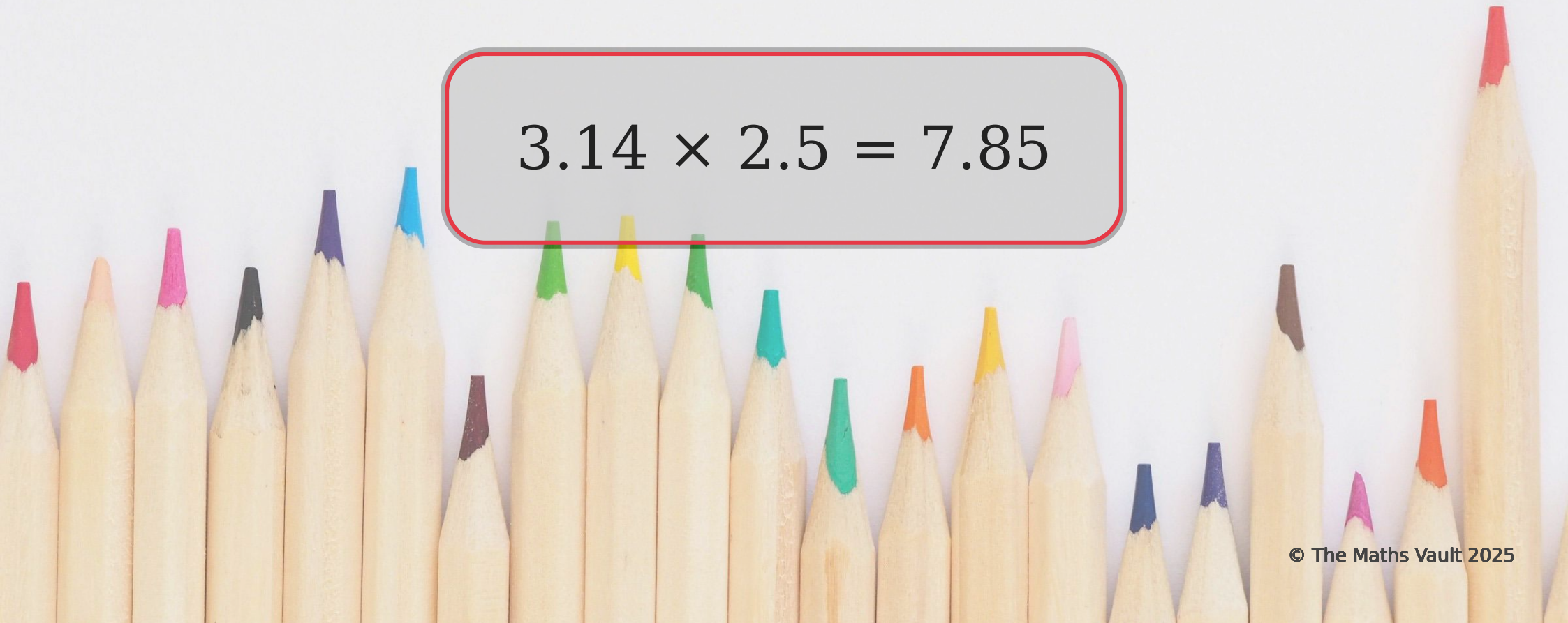
The product of two decimals between 0 and 1 will always be greater than either factor.

The product of two decimals between 0 and 1 will always be greater than either factor.

False. When multiplying two decimals between 0 and 1, the product is always smaller than either factor. For example, $0.5 \times 0.5 = 0.25$, which is smaller than both 0.5 and 0.5.

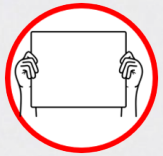
TRUE FALSE

$$3.14 \times 2.5 = 7.85$$



$$3.14 \times 2.5 = 7.85$$

True. $314 \times 25 = 7850$, and with 3 decimal places total (2 from 3.14 and 1 from 2.5), the product is 7.850, which simplifies to 7.85.



TRUE FALSE

When estimating 6.8×4.3, rounding to $7 \times 4 = 28$ gives an accurate estimate of the actual product.

When estimating 6.8 × 4.3, rounding to 7 × 4 = 28 gives an accurate estimate of the actual product.

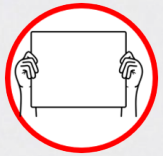
True. 6.8 × 4.3 = 29.24, and 28 is a reasonable estimate that's close to the actual product, demonstrating the usefulness of estimation in decimal multiplication.

TRUE FALSE

$$0.125 \times 8 = 1.0$$

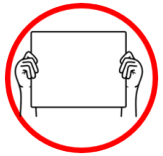
$$0.125 \times 8 = 1.0$$

True. $0.125 \times 8 = 1.000$, which simplifies to 1. This shows that 0.125 is the decimal equivalent of $1/8$, and $1/8 \times 8 = 1$.



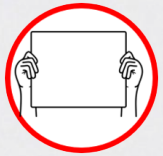
TRUE FALSE

If you multiply a number by 0.01, you move the decimal point three places to the left.



If you multiply a number by 0.01, you move the decimal point three places to the left.

False. Multiplying by 0.01 moves the decimal point two places to the left, not three. Multiplying by 0.001 would move it three places to the left.

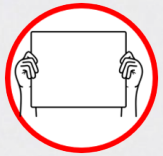


TRUE FALSE

The product of 5.6 and 2.5 will have the same value as $56 \times 25 \div 100$.

The product of 5.6 and 2.5 will have the same value as 56 × 25 ÷ 100.

True. 5.6 × 2.5 = 14.0, and 56 × 25 = 1400, then 1400 ÷ 100 = 14.0. This demonstrates the relationship between decimal multiplication and working with whole numbers.



TRUE FALSE

When multiplying 0.4×0.3, you can simply multiply $4 \times 3 = 12$ and place a decimal point to get 1.2.

When multiplying 0.4×0.3, you can simply multiply $4 \times 3 = 12$ and place a decimal point to get 1.2.

False. $0.4 \times 0.3 = 0.12$, not 1.2. The correct process is to multiply $4 \times 3 = 12$, then count the total decimal places (2), giving 0.12.