LESSON MAKER PRO

Decimal Power Moves

Estimate and solve decimal multiplication and division.

GRADE 5 · MA.5.NSO.2.4

MA.5.NSO.2.4 "Explore the multiplication and division of multi-digit numbers with decimals to the hundredths using estimation, rounding and place value."

NAME _____ DATE _____

ESTIMATE, THEN CALCULATE

Estimate by rounding a decimal to a nearby whole number or a compatible number. To multiply, multiply as whole numbers, then use place value to put the decimal point in the product. For division, use a compatible number to estimate, then divide the exact decimal carefully.

WORKED EXAMPLE

Estimate, then solve: 3.47×6

1. Round 3.47 to 3.5: $3.5 \times 6 = 21$.
2. Multiply without the decimal: $347 \times 6 = 2{,}082$.
3. 3.47 has 2 decimal places, so 2,082 becomes 20.82.

Answer: Estimate: 21; exact product: 20.82

PRACTICE 6 problems

1 Estimate 18.64×4 by rounding 18.64 to the nearest whole number.

ANSWER _____

2 Find the product: 12.35×8

ANSWER _____

3 Find the product: 4.25×14

ANSWER _____

4 Find the quotient: $57.6 \div 8$

ANSWER _____

5 Find the quotient: $93.24 \div 12$

ANSWER _____

6 Estimate $48.65 \div 7$ by using a compatible number.

ANSWER _____

APPLY IT Show your work

1 A student buys 16 digital art sticker packs. Each pack costs $1.85. Estimate the total cost by rounding $1.85 to the nearest dollar. Then find the exact total cost.

WORK SPACE

ANSWER _____

2 A robotics club has 45.36 meters of wire. The club cuts equal pieces for 9 small motors. Estimate the length of each piece by rounding 45.36 to the nearest whole number. Then find the exact length of each piece.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A team packs 24 bags of trail mix. Each bag weighs 18.75 ounces. Estimate the total weight by rounding 18.75 to the nearest whole number. Then find the exact total weight.

WORK SPACE AND ANSWER

ANSWER KEY

Decimal Power Moves

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Estimate 18.64 × 4 by rounding 18.64 to the nearest whole number.	**76**
2	Find the product: 12.35 × 8	**98.8**
3	Find the product: 4.25 × 14	**59.5**
4	Find the quotient: 57.6 ÷ 8	**7.2**
5	Find the quotient: 93.24 ÷ 12	**7.77**
6	Estimate 48.65 ÷ 7 by using a compatible number.	**7**

PART 2 · APPLY IT

1. **Estimate: $32; exact cost: $29.60** Round $1.85 to $2, then multiply 16 × 2 to estimate. Multiply 16 × $1.85 to find the exact cost.
2. **Estimate: 5 meters; exact length: 5.04 meters** Round 45.36 to 45, then divide 45 by 9 to estimate. Divide 45.36 by 9 for the exact length.

CHALLENGE

Estimate: 456 ounces; exact weight: 450 ounces

Accept equivalent decimal forms, such as 98.80 for 98.8 and 59.50 for 59.5. For estimates, accept only answers that follow the stated rounding or compatible-number direction.