

lesson four - student resource sheet

Lesson Objective: Multiply integers with like and unlike signs.

Vocabulary Box

product — The result when two or more numbers are multiplied. Example: In the problem $12 \times 3 = 36$, 36 is the product.

like signs — Signs that are the same. Examples: Positive-positive or negative-negative.

unlike signs — Signs that are different. Examples: Positive-negative or negative-positive.



Independent Practice

Please complete the following practice problems on your own. Then your teacher will review the answers. Make sure you show all your work.

I. Find each product.

1. -4×10

2. $-3 \times (-9)$

3. 15×3

4. $-6 \times (9)$

5. $-6 \times (-6)$

6. $-5 \times (8)$

7. 4×12

8. $8 \times (-4)$

9. $-9 \times (9)$

10. 8×6

11. $-12 \times (2)$

12. $-6 \times (25)$

II. Evaluate $-4a$ for each value of a .

1. $a = 6$

2. $a = 12$

3. $a = 3$

4. $a = -10$

5. $a = 7$

6. $a = -15$



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1. What is the sign of the product when you multiply *three negative* integers? Use examples to explain your answer.

2. What is the sign of the product when you multiply *four negative* integers? Use examples to explain your answer.

3. Simplify $(-3)^2$ _____

Lesson Four - Student Resource Sheet



Remember these 4 steps for problem solving:

- Step 1: Do you understand the problem?
- Step 2: Make a plan; draw a diagram or a picture.
- Step 3: Solve the problem.
- Step 4: Look back; is your answer reasonable?

1. Carl is a diver. On Friday, he dove 5 times as deep as he dove on Monday. If he dove -24 feet on Monday, how deep did he dive on Friday?
2. Does each person below end up with more or less money? By how much?

<i>Person</i>	<i>Financial Activity</i>
A. Kevin	Spends \$24 a day for 3 days.
B. Devin	Earns \$15 a day for 5 days.
C. Evan	Spends \$20 a day for 3 days. Then he earns \$18 a day for 4 days.



1. What is the value of 15 times -8 ? _____

2. $-7 \times (-7)$ _____

3. $-10 \times (3)$ _____

lesson five - student resource sheet

Lesson Objective: Divide integers with like signs.

Vocabulary Box

quotient — The result when one number is divided by another. Example: In the problem $8 \div 2 = 4$, 4 is the quotient.

dividend — The number to be divided in a division problem. Example: In the problem $8 \div 2 = 4$, 8 is the dividend.

divisor — The number you are dividing by, in a division problem. Example: In the problem $8 \div 2 = 4$, 2 is the divisor.

inverse operations — Operations that are opposite. Example: Addition and subtraction, or multiplication and division.

mean — Another term for average; the sum of items in a set of data divided by the number of items in the set. Example: The mean of 4, 6, and 8 is $(4 + 6 + 8) \div 3 = 6$.

Rule for Dividing Integers with Like Signs

If the signs are the same, the quotient is positive.

Examples: $24 \div 12 = 2$ $-12 \div -4 = +3$

Student Note Taking:



Guided Practice

Directions: Complete the following practice problems. Your teacher will review the answers. Make sure you show all your work.

I. Find each quotient in the following problems.

1. $64 \div 8 = \underline{\hspace{2cm}}$

2. $-10 \div (-2) = \underline{\hspace{2cm}}$

3. $20 \div 2 = \underline{\hspace{2cm}}$

4. $-21 \div (-7) = \underline{\hspace{2cm}}$

5. $45 \div 9 = \underline{\hspace{2cm}}$

6. $-42 \div (-6) = \underline{\hspace{2cm}}$

7. $-32 \div (-4) = \underline{\hspace{2cm}}$

8. $22 \div 11 = \underline{\hspace{2cm}}$

II. Evaluate $\frac{m}{2}$ for each value of m .

1. $m = 4$

2. $m = 44$

3. $m = 30$

III. Evaluate $\frac{n}{-4}$ for each value of n .

1. $n = -32$

2. $n = -64$

3. $n = -92$

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Summary/Closure

A. Vocabulary Words

Directions: Match each vocabulary term to its correct definition.

- | | |
|-----------------------|---|
| ___ Inverse operation | A. The number to be divided in a division problem. |
| ___ Divisor | B. The result when one number is divided by another. |
| ___ Mean | C. The number you are dividing by, in a division problem. |
| ___ Quotient | D. The sum of items in a set divided by the number of items in a set. |
| ___ Dividend | E. Operations that undo each other. |

B. Summarize What We Learned Today

Directions: Fill in the blank to make the statement correct.

The quotient of two integers with like signs is _____.

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Lesson Objective: Divide integers with like signs.

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mean — Another term for average; the sum of items in a set of data divided by the number of items in the set. Example: The mean of 4, 6, and 8 is $(4 + 6 + 8) \div 3 = 6$.



Independent Practice

Directions: Complete the following practice problems on your own. Your teacher will review the answers. Make sure you show all your work.

I. Solve each of the following problems.

1. $\frac{208}{26} =$

2. $0 \div -43 =$

3. $124 \div 4 =$

4. $\frac{-144}{-12} =$

5. $-24 \div -6 =$

6. $63 \div 9 =$

7. $-61 \div -61 =$

8. $110 \div 5 =$

9. $-32 \div -8 =$

10. $168 \div 4 \div 2 =$

11. $-252 \div -9 =$

12. $40 \div 10 =$

II. Match the problem to the solution. Write the corresponding letter of the correct answer in the space next to the problem.

1. _____ $\frac{-44}{-4}$

2. _____ $\frac{-143}{-11}$

3. _____ $\frac{126}{14}$

4. _____ $\frac{91}{13}$

5. _____ $\frac{-50}{-10}$

A. 5

B. 9

C. 11

D. 13

E. 7

BONUS?

1. $-56 \div -7 =$ _____

2. $35 \div 5 =$ _____

3. $22 \div 11 =$ _____

4. $-42 \div -3 =$ _____

5. $-48 \div -12 =$ _____

6. $46 \div 23 =$ _____

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Problem **Solving**

Remember the steps for problem solving:

1. Do you understand the problem?
2. Make a plan; draw a diagram or a picture.
3. Solve the problem.
4. Look back; is your answer reasonable?

1. Felicia played miniature golf at an amusement park. *Par* means a typical number of strokes (shots) for a hole. Scores above par are positive; scores below par are negative.

On the first five holes, Felicia's scores were +4, -1, +5, -2, and -1. What was her mean score for these holes? HINT: Remember how to find the mean.

2. The quotient of two integers is positive. What do you know about the signs of the integers?
3. Wendy's business lost \$42,000 over a period of eight years. What was the average annual loss?



1. $-300 \div (-20) = \underline{\hspace{2cm}}$

2. $-49 \div (-7) = \underline{\hspace{2cm}}$

3. $80 \div (5) = \underline{\hspace{2cm}}$