

Integer Rules

A visual guide to positive and negative numbers

Look at the signs first

- and - added together
stay negative

$$-4 + (-6) = -10$$

+ and + added together
stay positive

$$4 + 6 = 10$$

Same signs: multiply or divide
positive answer

$$(-4) \cdot (-6) = 24$$

Different signs: multiply or divide
negative answer

$$4 \cdot (-6) = -24$$

Adding and subtracting

Add two negative numbers

Add the numbers normally. Put a negative sign in front.

$$\begin{aligned} &-5 + (-7) \\ &5 + 7 = 12 \\ &\text{Answer: } -12 \end{aligned}$$

Real life: Spend \$5, then spend \$7. You spent \$12 total.

Add a positive and a negative

Find the difference. Use the sign of the number with the bigger amount.

$$\begin{aligned} &-9 + 4 \\ &9 - 4 = 5 \\ &\text{Answer: } -5 \end{aligned}$$

Real life: Owe \$9 and pay \$4. You still owe \$5.

Subtract a positive

Start at the first number. Move left on a number line.

$$\begin{aligned} &3 - 8 \\ &\text{Move 8 left from 3} \\ &\text{Answer: } -5 \end{aligned}$$

Real life: Have \$3 and spend \$8. You are short \$5.

Subtract a negative

Two signs together change into a plus sign.

$$\begin{aligned} &6 - (-3) \\ &6 + 3 \\ &\text{Answer: } 9 \end{aligned}$$

Real life: Removing a 3-point penalty gives 3 points back.

Integer Rules

Multiplication, division, and guided practice

Multiplying and dividing

Same signs

Same signs give a positive answer.

$$\begin{aligned}(-5) \times (-2) &= 10 \\ 18 \div 3 &= 6\end{aligned}$$

Think: Two negative signs work together to make positive.

Different signs

Different signs give a negative answer.

$$\begin{aligned}(-5) \times 2 &= -10 \\ 18 \div (-3) &= -6\end{aligned}$$

Think: One negative sign makes the answer negative.

Try these

1. $-4 + (-6) =$	2. $7 + (-3) =$	3. $-8 + 5 =$	4. $6 - 10 =$
5. $5 - (-4) =$	6. $(-3) \times 6 =$	7. $(-4) \times (-5) =$	8. $24 \div (-6) =$
9. $(-35) \div (-7) =$	10. $-2 - 7 =$		

Answers: 1. -10 | 2. 4 | 3. -3 | 4. -4 | 5. 9 | 6. -18 | 7. 20 | 8. -4 | 9. 5 | 10. -9