## LESSON

## Order of Operations

## Quick Review

To make sure everyone gets the same answer when solving an expression, we use this order of operations:

- Do the operations in brackets.
- Multiply and divide, in order, from left to right.
- Then add and subtract, in order, from left to right.
$>$ Solve: $12+20 \div 5>$ Solve: $9 \times(6-4)>$ Solve: $25-4+6$

$$
\begin{aligned}
& 12+20 \div 5 \\
& \downarrow \\
& =12+4 \\
& =16
\end{aligned}
$$



$$
\begin{aligned}
& 25-4+6 \\
& \quad \downarrow \\
& =21+6 \\
& =27
\end{aligned}
$$

## Try These

1. Solve each expression.

Use the order of operations.
a) $15+7 \times 2=$ $\qquad$ b) $34-6 \div 3=$ $\qquad$ c) $35+15 \times 2=$ $\qquad$
d) $30 \div(2+3)=$ $\qquad$ e) $44 \div 11+4=$
f) $(14 \div 7) \times 4=$ $\qquad$
g) $24+(16 \div 8)=$ $\qquad$ h) $(17+2)-14=$ $\qquad$ i) $3 \times 9-4=$ $\qquad$
2. Use mental math to solve.
a) $2 \times 9-3+4=$ $\qquad$
b) $5+150 \div 25=$ $\qquad$
c) $30+30 \div 6=$ $\qquad$ d) $(8 \times 9)-(8 \times 8)=$ $\qquad$
e) $24 \div 12 \times 9=$ $\qquad$ f) $(200+400) \times 2=$ $\qquad$
g) $18 \div 2 \times 2=$ $\qquad$ h) $4 \times(3 \times 5)=$
i) $12+6-2=$ $\qquad$
j) $(50+100) \times 2-100=$ $\qquad$

## Practice

1. Solve each expression.
a) $48 \div 12 \div 2=$ $\qquad$ b) $8 \times(10-4)=$
c) $28-12 \div 4=$
d) $7 \times(3+2)=$ $\qquad$ e) $16 \div 2 \times 9=$ $\qquad$ f) $15 \div(3 \times 5)=$ $\qquad$
2. Use brackets to make each number sentence true.
a) $2 \times 3+6=18$
b) $20 \times 15-2=260$
c) $5+4 \div 3=3$
d) $12+10 \div 11=2$
e) $6+8 \div 2=10$
f) $5 \times 4 \div 2=10$
3. Write a number sentence to show the order of operations you use to solve each problem.
a) Sandar bought 4 bags of chips at $\$ 2.99$ each.

She used a $\$ 2.00$ coupon to pay part of the cost.
How much did Sandar pay for the chips?
b) The decorating committee needs 3 balloons for each of 15 tables. They also need 20 balloons for each of the 4 walls of the room. How many balloons does the committee need?

## Stretch Your Thinking

You and 3 friends order a pizza, 4 large drinks, and a loaf of cheese bread.
You split the cost evenly with your friends.
What order of operations would you use to find out how much each person should pay?

