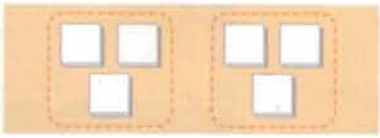
Understand and Apply

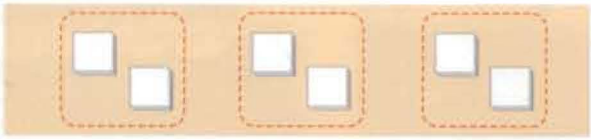
1. Jeff spent $2 a day on magazines for 3 days.

Which model illustrates the money Jeff spent on magazines?

a)



b)



2. Is the sign of the product positive or negative?

a) $(+4) \times (+4)$ **b)** $(+6) \times (-2)$

c) $(+5) \times (+3)$ **d)** $(+1) \times (-1)$

3. Copy and complete the table.

×	−3	−2	−1	0	+1	+2	+3
0							
+1							
+2							
+3							
+4							

4. Multiply.

a) $(+3) \times (+5)$ **b)** $(+6) \times (+5)$

c) $(+7) \times (+8)$ **d)** $(+9) \times (+8)$

e) $(+10) \times (+10)$ **f)** $(+11) \times (+11)$

5. Multiply.

a) $(+2) \times (-8)$ **b)** $(+3) \times (-6)$

c) $(+5) \times (-9)$ **d)** $(+7) \times (-7)$

e) $(+9) \times (-9)$ **f)** $(+13) \times (-2)$

6. Multiply.

a) $(+4) \times (+9)$ **b)** $(+4) \times (-11)$

c) $(+5) \times (+20)$ **d)** $(+13) \times (-3)$

e) $(+14) \times (-2)$ **f)** $(+17) \times (+2)$

7. Write and solve a multiplication sentence for each situation.

a) Fiona spends $5 per week on bus fare. How much does she spend in 2 weeks?

b) Lucy spends $2 per week on snacks. How much does she spend in 4 weeks?

c) Anton earns $8 each week for baby-sitting. How much does he earn in 3 weeks?

8. Write a number sentence to solve each problem.

a) Kendra pays $3 per day for bus transportation. How much does she pay in a school week?

b) Kendra earns $4 per hour baby-sitting on weekends. How much does she earn for 3 h on Friday and 4 h on Saturday?

c) What integer shows how much money Kendra has at the end of the week?

9. In a trivia game, Brett scored 2 points for every correct answer and lost a point for each mistake. He answered 24 questions correctly and 6 incorrectly. What was his total score?

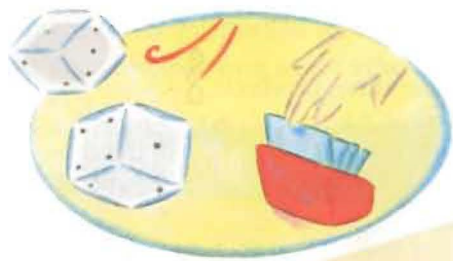
10. Create an integer multiplication problem of your own. Trade your problem with a classmate and solve it.

11. Estimate, then calculate each product.

a) $71 \times (-19)$ **b)** 122×121

c) $50 \times (-51)$ **d)** $61 \times (-49)$

e) $21 \times (-19)$ **f)** $1251 \times (-1499)$



Prepare your own trivia game. Ask some friends or family members to answer your questions. Players score +3 for each correct answer and −2 for each error.

Understand and Apply

1. Use a pattern to find the products.

a) $(+4) \times (+2) =$ ■
$(+3) \times (+2) =$ ■
$(+2) \times (+2) =$ ■
$(+1) \times (+2) =$ ■
$0 \times (+2) =$ ■
$(-1) \times (+2) =$ ■
$(-2) \times (+2) =$ ■
$(-3) \times (+2) =$ ■
$(-4) \times (+2) =$ ■

b) $(+4) \times (-2) =$ ■
$(+3) \times (-2) =$ ■
$(+2) \times (-2) =$ ■
$(+1) \times (-2) =$ ■
$0 \times (-2) =$ ■
$(-1) \times (-2) =$ ■
$(-2) \times (-2) =$ ■
$(-3) \times (-2) =$ ■
$(-4) \times (-2) =$ ■

2. Copy and complete the table.

×	−3	−5	−7	−9	+2	+4	+6
0							
−1							
−2							
−3							
−4							

3. Calculate these products.

a) $(-4) \times (+5)$
b) $(-8) \times (+9)$
c) $(-7) \times (+7)$
d) $(-10) \times (+4)$
e) $(-12) \times (+6)$
f) $(-13) \times (+5)$

4. Multiply.

a) $(-3) \times (-9)$
b) $(-6) \times (-9)$
c) $(-5) \times (-8)$
d) $(-4) \times (-8)$
e) $(-11) \times (-7)$
f) $(-15) \times (-3)$

5. Multiply.

a) $(-16) \times (-6)$
b) $(-14) \times (+4)$
c) $(-7) \times (+12)$
d) $(-8) \times (-10)$
e) $(-9) \times (-11)$
f) $(-17) \times (+3)$

6. Dan said, "The order of multiplication doesn't matter when I multiply. This helps me to multiply a negative number by a positive one. If I want to multiply $(-3) \times (+4)$, I can reverse the order of the factors. I think it's easier to use tiles to model $(+4) \times (-3)$." Do you agree with Dan that order doesn't matter? Explain.

7. Follow each calculator keying sequence and write the results.

a) C 7 +/− × 13 +/− =
b) C 8 +/− × 4 =
c) C 7 × 8 +/− =

8. Use your results from Problem 7 to write step-by-step instructions to multiply $(-9) \times (-11) \times (-1)$ following this calculator sequence.

C 9 +/− × 11 +/− × 1 +/− =

Make a budget that shows your income and expenditures for one month. Create some integer problems based on your budget.

9. Estimate, then calculate each product.

a) $(-91) \times (-101)$
b) $(-69) \times (+120)$
c) $(+152) \times (-38)$
d) $(-62) \times (-11)$
e) $(-19) \times (+203)$
f) $(-128) \times (-12)$

10. Find each product.

W/E

a) $(-1) \times (+1) \times (-1)$
b) $(+1) \times (+1) \times (-1)$
c) $(-1) \times (-1) \times (+1)$
d) $(-1) \times (+1) \times (-1)$

11. What did you discover in Problem 10 about the sign of the product of three integers? Test your discovery on some other integers.

In Your Journal

Do you enjoy using algebra tiles to solve problems involving integers? Explain.