

NAME \_\_\_\_\_

Module 2 Whole Number Operations  
Lesson 5 Problem-solving Strategies

# Independent Practice

## 2.5

Solve by using the problem-solving strategy *Draw a Diagram*.

1. Five teams played in a softball tournament. Each team played three games with each of the other teams. How many games were played?

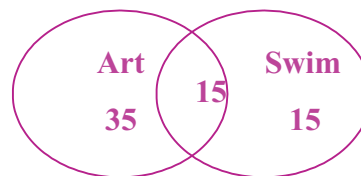
**30 games**

**Teams: A, B, C, D, E; (number of games played)**

**AB(3) BC(3) CD(3) DE(3)  
AC(3) BD(3) CE(3)  
AD(3) BE(3)  
AE(3)**

2. At Neighborhood Day Camp, 30 children take swimming lessons and 50 take art lessons. Fifteen of those children take both swimming and art lessons. How many children are there in all?

**65 children**



Solve by using the problem-solving strategy *Look for a Pattern or Make a List*.

3. A spinner with three equal sections colored orange, blue, and yellow is spun twice. How many possible outcomes are there? How many of the outcomes consist of landing on blue at least once?

**9; 5**

**OB, BO, YO  
OY, BY, YB  
OO, BB, YY**

4. Jordan has 35¢. How many different combinations of coins could she have?

**24 combinations**

<u>1¢</u>	<u>5¢</u>	<u>10¢</u>	<u>25¢</u>	<u>1¢</u>	<u>5¢</u>	<u>10¢</u>	<u>25¢</u>
35				5	6		
30	1			5	4	1	
25	2			5	2	2	
25		1		5	1		1
20	3			5		3	
20	1	1		0	7		
15	4			0	5	1	
15	2	1		0	3	2	
15		2		0	2		1
10	5			0	1	3	
10	3	1		0		1	1
10	1	2					
10			1				

Solve by using the problem-solving strategy *Guess and Check*.

5. There were 419 guests who attended the Fall Banquet. For an activity during the banquet, the guests were divided into equal groups. There were three left over after everyone was grouped. How many were in each group and how many groups were there?

**Possible answer: There were 52 groups of eight guests or eight groups of 52 guests.**

6. Find the missing digits in the following multiplication problem:

$$\begin{array}{r} \square 56 \\ \times \square \\ \hline 6\square 4 \end{array}$$

**156**

$$\begin{array}{r} \times 4 \\ \hline \end{array}$$

**624**

### Journal

1. What problem-solving strategy would you use if you were given the dividend and the remainder of a division problem and were asked to find the quotient and the divisor? Explain.
2. What problem-solving strategy would you use if you were asked to find all the different combinations that could be made using three one-digit numbers. Explain.
3. What problem-solving strategy would you use if you were asked to find the next term in a sequence of numbers or geometric figures? Explain.

## Cumulative Review

**Add or subtract to solve.**

1. April climbs 1,239 feet, takes a rest, climbs 988 feet, rests again, and then climbs 1,354 feet to reach the summit. How far did April climb all together?  
**3,581 feet**
2. Susan drove north 851 miles from a starting point and then drove 189 miles south. How many miles north is Susan from her starting point?  
**662 miles**

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**Module 2**      **Whole Number Operations**  
**Lesson 5**      **Problem-solving Strategies**

**Estimate before multiplying. Use the Partial Products Method of Multiplication.**

3.  $385 \times 6$   
 $\approx 2,400$   
 $= 2,310$

4. Carl earns \$3,895 per month. What is his yearly salary?  
 $\approx \$48,000$   
 $= \$46,740$

**Find each product. Use the Standard Multiplication Algorithm.**

5.  $77 \times 12$   
 $924$

6.  $92 \times 25$   
 $2,300$

**Divide using Partial Quotient Method.**

7. Kennedy divided 357 prizes equally among 21 people. How many prizes did each person get?  
 $17$  prizes

8. Nancy's yearly salary is \$32,656. How much does she earn each week?  
 $\$628$

**Answer each question by interpreting the remainder.**

9. A golf pro needs to buy golf balls that come 18 to a box. How many boxes does he have to buy if he needs 1,085 golf balls?  
**Increase the quotient, 61 boxes**

10. There are 15 display shelves in the library. James is told to put 25 books on each shelf and stack the remaining books on a table. If James starts with 380 books, how many will he stack on the table?  
**Use the remainder, five books**

### Possible Journal Answers

1. **Guess and Check.** I would guess the divisor and then check to see if using it left the given remainder.
2. **Make an Organized List.** I would list all of the different ways that the numbers could be written and then count all of the possible ways.
3. **Find a Pattern.** I would find what is alike or what is different between each number or figure in the sequence, find the rule, and then apply it to find the next term.