SKILL 51

Are You Ready?

Add and Subtract Integers

Teaching Skill 51

Objective Add and subtract integers.

Explain to students that adding and subtracting integers is best understood by thinking about absolute values, that is, the numbers without the negative signs.

Review with students how to add integers with the same signs. Ask: **If both signs are positive, what will be the sign of the sum?** (positive) **If both signs are negative, what will be the sign of the sum?** (negative) **Does it matter which number is larger?** (No) Work through Example 1.

Review with students how to add integers with opposite signs. Stress that the sign of the sum is determined by the larger number. Work through Example 2.

Review with students how to subtract integers. Ask: **What is the opposite of 5?** (−5) **What is the opposite of −8?** (+8) Work through Example 3.

Remind students that zero is neither positive nor negative. Ask: **When is the sum of two integers zero?** (when the numbers are opposites, e.g. 4 and −4)

Have students complete the exercises.

PRACTICE ON YOUR OWN

In exercises 1–12, students add and subtract integers.

CHECK

Determine that students know how to add and subtract integers.

Students who successfully complete the **Practice on Your Own** and **Check** are ready to move on to the next skill.

COMMON ERRORS

Students may confuse a subtraction sign with a negative sign.

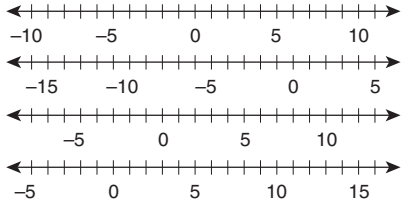
Students who made more than 2 errors in the **Practice on Your Own,** or who were not successful in the **Check** section, may benefit from the **Alternative Teaching Strategy.**

Alternative Teaching Strategy

Objective Add and subtract integers using a number line.

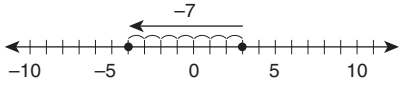
Materials needed: copies of the number lines shown below.

Some students may benefit from visualizing addition and subtraction using a number line. Give each student copies of the number lines. Tell students they are going to add integers using the number lines.



Write "3 + (−7)" on the board. Direct students' attention to the first number line. Ask: **What do each of the tick marks represent on the number lines?** (one unit)

Instruct students to place a dot on the number 3. Ask: **If you were going to add 7 to 3, which direction would you move on the number line?** (right) **Since you are adding −7 instead, which way do you move?** (left) Instruct students to move 7 units to the left. Ask: **What is the result?** (−4)



Next, have students use the second number line to add –13 + 15. Ask: **Where do you place your first dot?** (–13) **In which direction should you move?** (right) Make sure students arrive at 2 as an answer.

After students have a good understanding of adding integers, explain how to use the number line to subtract integers. Have students use the third and fourth number lines to practice the following: 8 − 14 and −2 − (−9). Make sure students know to move to the left when subtracting positive numbers and to the right when subtracting negative numbers (the opposite of when adding).

Have the students make up additional problems and draw their own number lines.

Name _____ Date _____ Class _____

SKILL 51

Are You Ready?

Add and Subtract Integers

Adding Integers		Subtracting Integers
Same Signs	Opposite Signs	
Step 1: Ignore the signs. Step 2: Add the two numbers. Step 3: Add the sign of the larger number to the answer.	Step 1: Ignore the signs. Step 2: Subtract the smaller number from the larger number. Step 3: Add the sign of the larger number to the answer.	Instead of subtracting, add the opposite of the second number and then use the rules for adding integers.
Example 1: Add $-3 + (-9)$. $3 + 9 = 12$ Since both numbers are negative, the answer is also negative. $-3 + (-9) = -12$	Example 2: Add $7 + (-12)$. $12 - 7 = 5$ Since the larger number is negative ($12 > 7$), the answer is also negative. $7 + (-12) = -5$	Example 3: Subtract $6 - (-3)$. The opposite of -3 is 3. $6 + 3 = 9$

Practice on Your Own

Perform each indicated operation.

1. $-11 + 16$ _____

2. $-22 + 18$ _____

3. $15 - (-10)$ _____

4. $-3 - 14$ _____

5. $20 + (-9)$ _____

6. $-6 + (-5)$ _____

7. $6 - (-13)$ _____

8. $8 - 14$ _____

9. $-100 + 95$ _____

10. $-7 + (-10)$ _____

11. $-10 - (-10)$ _____

12. $-25 - (-40)$ _____

Check

Perform each indicated operation.

13. $-2 + 8$ _____

14. $10 - 18$ _____

15. $14 + (-21)$ _____

16. $7 - (-3)$ _____

17. $40 + (-35)$ _____

18. $-17 - 4$ _____

19. $-12 + 12$ _____

20. $18 - (-13)$ _____

SKILL 52

Are You Ready?

Multiply and Divide Integers

Teaching Skill 52

Objective Multiply and divide integers.

Inform students that multiplying and dividing integers is just like multiplying and dividing whole numbers; the only difference is determining the sign of the final product or quotient.

Review with students the rule for multiplying and dividing integers with like signs. Point out that the sign of the answer is determined by the number of factors that have a negative sign. If none (0) of the factors are negative, the product or quotient is positive. Likewise, if both (2) of the factors are negative, the product or quotient is positive. Ask: **Does it matter which number is larger or if the two numbers have the same value?** (No)

Next, review the rule for multiplying and dividing integers with unlike signs. Ask: **What does "unlike" mean?** (One of the signs is negative and the other is positive.) Ask: **Does it matter which number is larger or if the two numbers have the same value?** (No)

Have students complete the exercises.

PRACTICE ON YOUR OWN

In exercises 1–12, students multiply and divide integers.

CHECK

Determine that students know how to multiply and divide integers.

Students who successfully complete the **Practice on Your Own** and **Check** are ready to move on to the next skill.

COMMON ERRORS

Students may forget to include the negative sign when multiplying or dividing integers with unlike signs.

Students who made more than 2 errors in the **Practice on Your Own,** or who were not successful in the **Check** section, may benefit from the **Alternative Teaching Strategy.**

Alternative Teaching Strategy

Objective Multiply and divide integers using flashcards.

Materials needed: multiple copies of the flashcards shown below

$(+)(+)$	$(+)(-)$	$(-)(+)$	$(-)(-)$
$+$	$-$	$-$	$+$
$(+) \div (+)$	$(+) \div (-)$	$(-) \div (+)$	$(-) \div (-)$
$+$	$-$	$-$	$+$
$(12)(10)$	$15(-3)$	$-9(6)$	$(-12)(-6)$
$+120$	-45	-54	$+72$
$15 \div 5$	$26 \div (-2)$	$-18 \div 3$	$-40 \div (-8)$
$+3$	-13	-6	$+5$
$(-9)(-9)$	$7(-7)$	$8 \div (-8)$	$-3 \div (-3)$
$+81$	-49	-1	$+1$

Have students work in pairs. Give each pair of students one set of flashcards. Have them divide the cards into two groups; one group with positive and negative signs only, and one group with both numbers and signs.

Instruct students to shuffle the group of cards that has signs only. Students should take turns drawing a card and stating a rule such as "positive times negative is negative."

When students show an understanding of how the products and quotients of signs work, instruct them to switch to the cards that have numbers.

Again, students should shuffle the cards and repeat the process described above.

As an extension of this exercise, have students create additional cards with a variety of sign combinations.

Name _____ Date _____ Class _____

SKILL 52

Are You Ready?

Multiply and Divide Integers

Multiplying and Dividing Integers	
Like Signs	Unlike Signs
Rule: When multiplying or dividing two integers with like signs (both positive or both negative), the product or quotient is always positive.	Rule: When multiplying or dividing two integers with unlike signs (one positive and one negative), the product or quotient is always negative.
Example 1: Multiply $-5(-10)$. The signs are the same so the product is $+50$.	Example 2: Divide $27 \div (-9)$. The signs are different so the quotient is -3.

Practice on Your Own

Perform each indicated operation.

1. $5(-3)$ _____

2. $24 \div (-6)$ _____

3. $-11(5)$ _____

4. $-40 \div 5$ _____

5. $-9(-7)$ _____

6. $-18 \div (-3)$ _____

7. $-25(6)$ _____

8. $\frac{-60}{4}$ _____

9. $13(2)$ _____

10. $\frac{-49}{-7}$ _____

11. $-8(4)$ _____

12. $\frac{48}{-16}$ _____

Check

Perform each indicated operation.

13. $7(-10)$ _____

14. $-42 \div (-7)$ _____

15. $-8(9)$ _____

16. $35 \div (-5)$ _____

17. $-4(-16)$ _____

18. $-144 \div 12$ _____

19. $-3(-3)$ _____

20. $\frac{-120}{-10}$ _____

SKILL 55

Are You Ready?

Order of Operations

Teaching Skill 55

Objective Use the correct order of operations to evaluate expressions.

Explain to students that order of operations gives us a set of rules as to which operations are carried out first when an expression involves more than one operation.

Review the correct order of operations with students and the trick for remembering the order.

Direct students' attention to the first example. Demonstrate why having a set of rules is necessary by working out the problem left to right instead of using the correct order of operations. ($8 - 2 \cdot 3 = 6 \cdot 3 = 18$) Ask: **Do you get the same result?** (No)

Have students consider the second and third examples. Before working through the examples, ask a volunteer to list the operations they see in each problem, in the order in which they would be performed.

Have students complete the exercises.

PRACTICE ON YOUR OWN

In exercises 1–12, students evaluate expressions using order of operations.

CHECK

Determine that students know how to use the correct order of operations to evaluate expressions.

Students who successfully complete the **Practice on Your Own** and **Check** are ready to move on to the next skill.

COMMON ERRORS

Students may always work from left to right and forget to follow the correct order of operations.

Students who made more than 2 errors in the **Practice on Your Own,** or who were not successful in the **Check** section, may benefit from the **Alternative Teaching Strategy.**

Alternative Teaching Strategy

Objective Use the correct order of operations to evaluate expressions.

Some students may benefit from manipulating numbers and the order of operations.

Write the following numbers on the board: 2, 3, 4, 5, and 6. Tell students that you are going to use each number exactly once, along with one set of parentheses and one each of $+$, $-$, $\cdot$, and $\div$ to arrive at a final result of 4.

Write: $6 - (2 \cdot 3 + 4) \div 5$. Work through the correct order of operations to demonstrate that the result is 4.

$$\begin{aligned} & 6 - (2 \cdot 3 + 4) \div 5 \\ = \ & 6 - (6 + 4) \div 5 \\ = \ & 6 - 10 \div 5 \\ = \ & 6 - 2 \\ = \ & 4 \end{aligned}$$

Instruct students to repeat this exercise using the same numbers and the same rules to arrive at a result of 3. Point out that they can have as many, or as few, numbers inside the parentheses as they need. (Students may arrive at different results; one possible result is $(2 + 3) \div 5 + 6 - 4$.)

If students have trouble reaching an answer, have them work in pairs. As students become more comfortable, use larger numbers and mix up the operations. For example, require the use of one exponent, two additions, and two subtractions. Be sure to specify whether any parentheses are allowed.

Sample problems:

1) Use the numbers 1, 2, 3, 4, and 5 with one exponent, and one each of $+$, $-$, and $\cdot$ to arrive at a result of 13. No parentheses allowed. Possible answer: $5 \cdot 4 - 2^3 + 1$.

2) Use the numbers 2, 3, 4, 6, and 10 with one exponent, one set of parentheses, and one each of $+$, $-$, and $\div$ to arrive at a result of 14. Possible answer: $3^2 + 10 \div (6 - 4)$.

Name _____ Date _____ Class _____

SKILL 55

Are You Ready?

Order of Operations

The Correct Order of Operations			
1. **P**arentheses	2. **E**xponents	3. **M**ultiply / **D**ivide (left to right)	4. **A**dd / **S**ubtract (left to right)
One way to remember the correct order: **P**lease **e**xcuse **m**y **d**ear **A**unt **S**ally.			

Example 1

Evaluate $8 - 2 \cdot 3$.

$8 - 6$

2

Example 2

Evaluate $(6 + 4)^2 \div 5$.

$10^2 \div 5$

$100 \div 5$

20

Example 3

Evaluate $2^3 + 4 \cdot 3 - 6$.

$8 + 4 \cdot 3 - 6$

$8 + 12 - 6$

$20 - 6$

14

Practice on Your Own

Evaluate each expression.

1. $(5 + 1) - 3$ _____

2. $8 \cdot 8 \div 16$ _____

3. $6 \cdot 5 + 1$ _____

4. $24 \div 3 - 5$ _____

5. $(8 + 10) \div 3$ _____

6. $20 + 1 - 7$ _____

7. $7^2 + 1$ _____

8. $72 \div 2^3$ _____

9. $21 + 15 \div 3$ _____

10. $8 + 7 \cdot 5$ _____

11. $3 \cdot 6 - 2 \cdot 9$ _____

12. $(4 + 2)^2 \div 9$ _____

Check

Find the absolute value of each expression.

13. $(6 + 10) \div 4$ _____

14. $40 - 4 \cdot 10$ _____

15. $5 \cdot 10 \div 2$ _____

16. $15 - 3 + 10$ _____

17. $4 \cdot 8 \div 4^2$ _____

18. $8 \cdot 5 + 3 \cdot 6$ _____

SKILL 34

Are You Ready?

Identify Similar Figures

Teaching Skill 34

Objective Identify similar figures.

Instruct students to read the definition at the top of the page. Ask: **What is the difference between similar figures and congruent figures?** (The sides of congruent figures are equal while the sides of similar figures are only proportional.)

Ask: **Are all triangles similar?** (No) **Are all right triangles similar?** (No) **Are all equilateral triangles similar?** (Yes) Explain why the last question is yes while the first two are no.

Draw two triangles on the board—one with sides of lengths 1, 2, and 3, and a larger one with sides of lengths 3, 6, and 9. Make the angles approximately equal. Point out that all the lengths of the sides of the larger triangle are three times the lengths of the sides of the smaller triangle. Explain that this means the sides are proportional with a ratio of 1 to 3, and the triangles are similar.

Have students read the Similarity Theorem and then complete the practice exercises.

PRACTICE ON YOUR OWN

In exercises 1–6, students determine if geometric figures are similar.

CHECK

Determine that students know how to determine whether geometric figures are similar.

Students who successfully complete the **Practice on Your Own** and **Check** are ready to move on to the next skill.

COMMON ERRORS

Students may not be able to correctly determine if the sides are proportional.

Students who made more than 2 errors in the **Practice on Your Own**, or who were not successful in the **Check** section, may benefit from the **Alternative Teaching Strategy**.

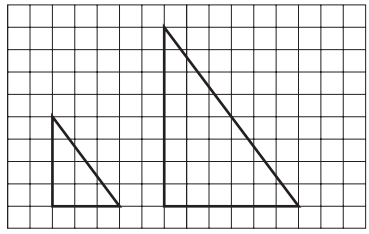
Alternative Teaching Strategy

Objective Identify similar figures.

Materials needed: centimeter graph paper, centimeter ruler, protractors

Some students may benefit from constructing and measuring similar figures.

Have students draw two right triangles on graph paper. One should have a base of 3 units and a height of 4 units and the other a base of 6 units and a height of 8 units.



Ask: **What is the ratio of the smaller base to the larger base?** (3 to 6 or 1 to 2). **What is the ratio of the smaller height to the larger height?** (4 to 8 or 1 to 2)

Ask: **What should be the ratio of the smaller hypotenuse to the larger hypotenuse?** (1 to 2) Have students use a ruler to measure and confirm that the ratio is 5 to 10 which is the same as 1 to 2.

Explain that since the ratios are all equal, the sides of the two triangles are proportional and the triangles are therefore similar.

Have students use a protractor to measure and label each angle (not including the right angle) of the smaller triangle. Ask: **Since the triangles are similar, what should the angles of the larger triangle be?** (They should be congruent to the corresponding angles of the smaller triangle.)

Repeat the exercise by having students draw two rectangles, one that is 2 by 3 and one that is 6 by 9.

An extension of this exercise is to have students explore how the perimeters and areas of similar figures are related.

Name _____ Date _____ Class _____

SKILL 34

Are You Ready?

Identify Similar Figures

Definition: Two polygons are similar if corresponding angles are congruent and corresponding sides are proportional.

Similarity Theorem (SSS): If the corresponding sides of two figures are proportional, then the figures are similar.

Practice on Your Own

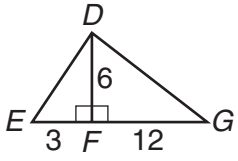
Identify which figures appear to be similar.

1. Figure A Figure B Figure C Figure D Answer: ____ and ____

2. Figure A Figure B Figure C Figure D Answer: ____ and ____

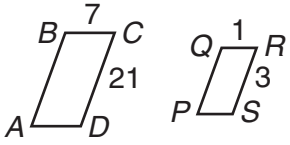
Determine if the given figures are similar. If so, explain why.

3. $\triangle DEF$ and $\triangle GDF$



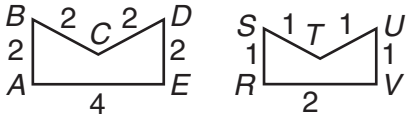
_____

4. parallelograms *ABCD* and *PQRS*



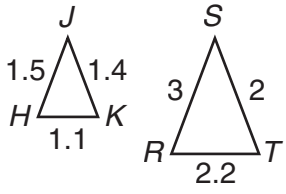
_____

5. Figures *ABCDE* and *RSTUV*



_____

6. $\triangle HJK$ and $\triangle RST$



_____

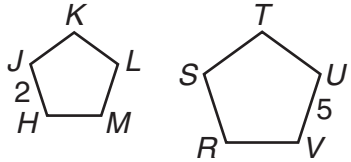
Check

Identify which figures appear to be similar.

7. Figure A Figure B Figure C Figure D Answer: ____ and ____

Determine if the given figures are similar. If so, explain why.

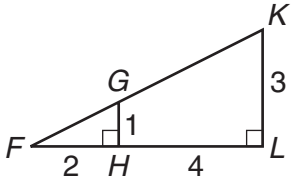
8. regular pentagons *HJKLM* and *RSTUV*



_____

_____

9. $\triangle FGH$ and $\triangle FKL$



_____

_____

SKILL 35

Are You Ready?

Find Missing Measures in Similar Figures

Teaching Skill 35

Objective Find missing measures in similar figures.

Instruct students to read the statement at the top of the page and the similarity proportion statements.

Remind students that a proportion is a statement that two ratios are equal. Emphasize that the order in which the proportion is written depends on the order of the letters in the figure names.

Have students look at the example and consider the sides of the figures that are given and the side that is missing. Point out that *H and J* are the first two letters in the name of the figure and *H and L* are the first and last letters. Ask: **Which letters are *P* and *S*?** (first and last) **And the missing side, *PQ*?** (first and second) Stress that this matters when setting up the proportion. Write on the board:

$$\frac{\text{first two}}{\text{first and last}} = \frac{\text{first two}}{\text{first and last}}$$

Encourage students to write proportions using this method.

PRACTICE ON YOUR OWN

In exercises 1–7, students determine which sides and angles of similar figures can be found, and find the missing measures.

CHECK

Determine that students know how to find the missing measure in similar figures.

Students who successfully complete the **Practice on Your Own** and **Check** are ready to move on to the next skill.

COMMON ERRORS

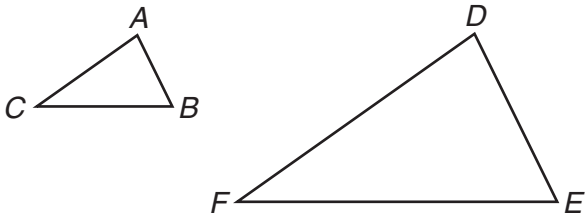
Students may not pay attention to the order of the letters in figure names and may "mismatch" sides or angles.

Students who made more than 2 errors in the **Practice on Your Own**, or who were not successful in the **Check** section, may benefit from the **Alternative Teaching Strategy**.

Alternative Teaching Strategy

Objective Find missing measures in similar figures.

Draw the triangles shown below on the board. One triangle should be about 3 times the size of the other. Have the students draw approximately the same triangles on their paper.



Next, write the following statement on the board in large letters:

$$\triangle ABC \sim \triangle DEF$$

Ask: **According to the diagram, which angle of triangle *DEF* corresponds to angle *ABC*?** (*DEF*) Ask: **If the measure of angle *ABC* is 40°, what is the measure of angle *DEF*?** (40°)

Repeat the question for each of the angles. Point out that the letters of corresponding angles are written in the same order as in the names of the triangles.

Have students label the diagram as follows: $AB = 2$, $BC = 5$, $EF = 15$, and $DE = ?$

Ask: **According to the diagram, which side corresponds to *AB*?** (*DE*) **Which side corresponds to *BC*?** (*EF*) Again, point out the relevance of the order in which the letters are written in the names of the triangles.

Review with students how to set up and solve a proportion. Have students set up the following proportion. Then substitute appropriate values and solve.

$$\frac{AB}{BC} = \frac{DE}{EF} \qquad \left(\frac{2}{5} = \frac{?}{15},\ DE = 6\right)$$

Repeat this exercise using diagrams of similar rectangles. Be sure to emphasize the order of the letters each time.

Name _____ Date _____ Class _____

SKILL 35

Are You Ready?

Find Missing Measures in Similar Figures

Corresponding sides of similar polygons are proportional. Corresponding angles of similar polygons are congruent.

Notation: $\triangle ABC \sim \triangle DEF$ Remember: order matters!
Similarity proportion statements: $\frac{AB}{BC} = \frac{DE}{EF}$; $\frac{AC}{BC} = \frac{DF}{EF}$; $\frac{AB}{AC} = \frac{DE}{DF}$; etc.

Example: $\square HJKL \sim \square PQRS$. $HJ = 6$, $HL = 2$, and $PS = 7$. What is PQ?

- Step 1: Write a proportion using letters; use the sides given and the missing side:
  $\frac{HJ}{HL} = \frac{PQ}{PS}$
- Step 2: Replace the given sides with the appropriate values: $\frac{6}{2} = \frac{PQ}{7}$.
- Step 3: Solve the proportion using cross-multiplication:
  $6(7) = 2(PQ)$; $PQ = \frac{6(7)}{2} = \frac{42}{2} = 21$

Practice on Your Own

1. $\triangle RST \sim \triangle XYZ$. Complete the congruence statement: $m\angle TSR \cong m\angle$ ☐
2. $\triangle ABC \sim \triangle STU$. $m\angle BCA = 62°$. What other angle has a measure of 62°? _____
3. $\square AGPS \sim \square DHNZ$. $m\angle GPS = 65°$ and $m\angle PSA = 115°$.
   What is the measure of $\angle NZD$? _____
4. $\square DEFG \sim \square LMNO$. If you know the values of DE, DF, and LN, for which other side is it possible to find the length? _____
5. $\pentagon ABCDE \sim \pentagon LMNOP$. Complete the proportion: $\frac{BE}{AC} = \frac{\square}{LN}$
6. $\triangle HPV \sim \triangle UBK$. $UB = 18$, $HP = 2$, and $BK = 90$. What is PV? _____
7. $\square WXYZ \sim \square PQRS$. $XY = 5$, $YZ = 12$, and $QR = 30$. What is RS? _____

Check

8. $\triangle FGH \sim \triangle LMN$. $m\angle HFG = 84°$. What other angle has a measure of 84°? _____
9. $\square ABCD \sim \square PQRS$. $m\angle ABC = 80°$ and $m\angle DAB = 100°$.
   What is the measure of $\angle PQR$? _____
10. $\square JKLM \sim \square DEFG$. If you know the values of DF, DG, and JL, for which other side is it possible to find the length? _____
11. $\triangle CDE \sim \triangle HJK$. $DE = 24$, $JK = 3$, and $CE = 64$. What is HK? _____
12. $\trapezium UVWX \sim \trapezium CDEF$. $WX = 9$, $VW = 11$, and $EF = 36$. What is DE? _____

SKILL 50 ANSWERS:

Practice on Your Own

1. 75

2. 800

3. 0.02

4. $300

5. $144

6. $2000

7. 3%

8. 4%

Check

9. 200

10. 500

11. 0.015

12. $2400

13. $12,000

14. 5%

SKILL 51 ANSWERS:

Practice on Your Own

1. 5

2. −4

3. 25

4. −17

5. 11

6. −11

7. 19

8. −6

9. −5

10. −17

11. 0

12. 15

Check

13. 6

14. −8

15. −7

16. 10

17. 5

18. −21

19. 0

20. 31

SKILL 52 ANSWERS:

Practice on Your Own

1. −15

2. −4

3. −55

4. −8

5. 63

6. 6

7. −150

8. −15

9. 26

10. 7

11. −32

12. −3

Check

13. −70

14. 6

15. −72

16. −7

17. 64

18. −12

19. 9

20. 12

SKILL 53 ANSWERS:

Practice on Your Own

1. 5

2. 18

3. $\frac{9}{11}$

4. -9

5. 20

6. 8

7. 13

8. $-\frac{1}{25}$

Check

9. 4

10. 72

11. -7

12. $\frac{2}{5}$

13. 10

14. -12

15. -6

16. $\frac{1}{2}$

SKILL 54 ANSWERS:

Practice on Your Own

1. 15

2. 8

3. 0.4

4. 1.19

5. 10

6. 4

7. 0.75

8. 0.7

9. 6

10. 7

11. 0

12. 12

Check

13. 11

14. 2.3

15. 10

16. 25

17. 13

18. 0

19. 1.1

20. 1

SKILL 55 ANSWERS:

Practice on Your Own

1. 3

2. 4

3. 31

4. 3

5. 6

6. 14

7. 50

8. 9

9. 26

10. 43

11. 0

12. 4

Check

13. 4

14. 0

15. 25

16. 22

17. 2

18. 58

SKILL 30 ANSWERS:

Practice on Your Own

1. 27
2. 59
3. 45
4. 20
5. 36
6. 10
7. 37
8. 20

Check

9. 32
10. 33
11. 30
12. 30

SKILL 31 ANSWERS:

Practice on Your Own

1. 10
2. 17
3. $6\sqrt{2}$
4. $2\sqrt{13}$
5. 15
6. $2\sqrt{17}$

Check

7. 13
8. 30
9. $5\sqrt{2}$
10. 41

SKILL 32 ANSWERS:

Practice on Your Own

1. 6
2. $7\sqrt{3}$
3. $8\sqrt{2}$
4. 9
5. $4\sqrt{3}$
6. 4
7. $6\sqrt{2}$
8. $\frac{20\sqrt{3}}{3}$

Check

9. 15
10. $9\sqrt{3}$
11. $10\sqrt{2}$
12. 11

SKILL 33 ANSWERS:

Practice on Your Own

1. Yes; ASA
2. No
3. Yes; HL
4. Yes; ASA
5. Yes; SAS
6. No

Check

7. No
8. Yes; HL
9. Yes; SSS

SKILL 34 ANSWERS:

Practice on Your Own

1. A and D
2. B and C
3. Yes; corresponding sides are in proportion (1:2)
4. Yes; corresponding sides are in proportion (7:1)
5. Yes; corresponding sides are in proportion (2:1)
6. No

Check

7. A and C

8. Yes; corresponding sides are in proportion (1:2.5)

9. Yes; corresponding sides are in proportion (1:3)

SKILL 35 ANSWERS:

Practice on Your Own

1. ZYX

2. $\angle TUS$

3. 115°

4. LM

5. MP

6. 10

7. 72

Check

8. $\angle NLM$

9. 80°

10. JM

11. 8

12. 44

SKILL 36 ANSWERS:

Practice on Your Own

1. 11 in.

2. 52 cm

3. 48 in.

4. 22 m

5. 13 ft

6. 12 in.

Check

7. 9 in.

8. 19 ft

9. 34 cm

SKILL 37 ANSWERS:

Practice on Your Own

1. 10 $in.^2$

2. 12 ft^2

3. 144 cm^2

4. 24 m^2

5. 210 ft^2

6. 35 yd^2

7. 9 $in.^2$

8. 22 m^2

Check

9. 102 cm^2

10. 66 m^2

11. 36 ft^2

12. 20 $in.^2$

SKILL 38 ANSWERS:

Practice on Your Own

1. 36 $units^2$

2. 40 $units^2$

3. 400π $units^2$

4. 31.5 $units^2$

5. 20 $units^2$

6. 9 $units^2$

Check

7. 30 $units^2$

8. 16π $units^2$

9. 1200 $units^2$

10. 126 $units^2$

11. 20 $units^2$

12. 9π $units^2$