

Extra Practice 1A**Lesson 2.1: Representing Integers**

1. Write the integer represented by each set of tiles.

a) $\boxed{R} \boxed{R} \boxed{R} \boxed{R} \boxed{R}$

b) $\boxed{Y} \boxed{Y} \boxed{Y}$

c) $\begin{array}{cc} \boxed{Y} & \boxed{Y} \\ \boxed{R} & \boxed{R} \end{array} \boxed{R}$

d) $\begin{array}{cccc} \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} \\ \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \end{array} \boxed{R} \boxed{R} \boxed{R}$

e) $\begin{array}{ccccc} \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} \\ \boxed{R} & & & & \end{array}$

f) $\begin{array}{cc} \boxed{Y} & \boxed{Y} \\ \boxed{R} & \boxed{R} \end{array}$

2. Use coloured tiles. Draw two different models for each integer.

a) -3

b) $+5$

c) -6

d) 0

3. Which integer is modelled by each set of tiles?

a) 3 yellow tiles and 4 red tiles

b) 16 red tiles and 20 yellow tiles

c) 9 yellow tiles and 9 red tiles

d) 85 red tiles and 47 yellow tiles

4. a) You have 4 red tiles and want to model -2 .

How many yellow tiles do you need?

b) You have 5 yellow tiles and you want to model -3 .

How many red tiles do you need?

c) You have 5 red tiles and 2 yellow tiles.

What tiles do you need to model $+3$?

d) You have 4 red tiles and 6 yellow tiles.

What tiles do you need to model -3 ?

Extra Practice 2A

Lesson 2.2: Adding Integers with Tiles

1. What sum does each set of tiles model?

Write the addition equation.

a) $\begin{array}{cccccc} \boxed{Y} & \boxed{Y} & \boxed{Y} & & & \\ \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \end{array}$

b) $\begin{array}{ccccc} \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} \\ \boxed{R} & \boxed{R} & & & \end{array}$

c) $\begin{array}{cccc} \boxed{Y} & & & \\ \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \end{array}$

d) $\begin{array}{cccc} \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} \\ \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \end{array}$

2. What sum does each set of tiles represent?

- a) 4 yellow tiles and 2 red tiles
- b) 8 red tiles and 1 yellow tile
- c) 6 yellow tiles and 16 red tiles
- d) 24 yellow tiles and 37 red tiles

3. Sketch the tiles to represent each sum.

Write the addition equation.

- a) $(+3) + (-1)$
- b) $(+3) + (-4)$
- c) $(-7) + (-2)$
- d) $(+2) + (+4)$
- e) $(-2) + (+5)$
- f) $(-7) + (-7)$

4. Represent each sentence with integers, and then find each sum.

What does each sum represent?

- a) Jose deposits \$100, and then withdraws \$27.
- b) The elevator descended 4 levels, and then rose 19 levels.
- c) The temperature raised 4°C , then dropped 10°C .
- d) The value of the dollar rose 4¢ , and then fell 2¢ .

5. These are the scores on each hole of mini-golf.

What is the cumulative score after each hole?

Which hole did the golfer find easiest? Hardest?

Hole Number	1	2	3	4	5	6	7	8	9
Score	-3	+1	0	-1	+3	-2	-1	0	+4

Extra Practice 3A

Lesson 2.3: Adding Integers on a Number Line

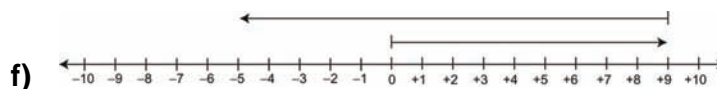
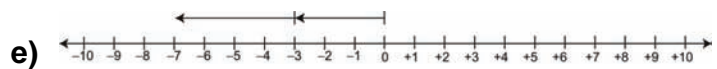
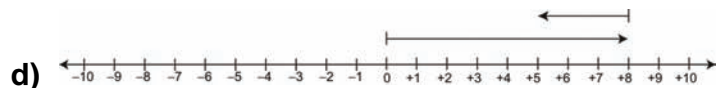
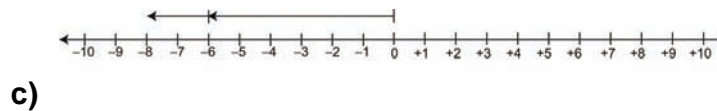
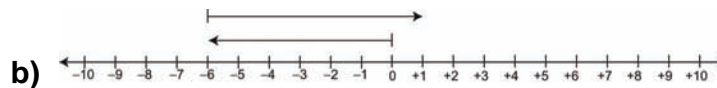
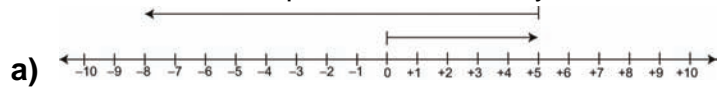
1. Use a number line to add. Use coloured tiles to check.

a) $(+3) + (-1)$ b) $(-4) + (-3)$

c) $(+5) + (-7)$ d) $(-8) + (+5)$

e) $(-4) + (+7)$ f) $(+5) + (-10)$

2. Write the addition equation modelled by each number line.



3. Use a number line. Write an addition equation for each situation.

What does each sum represent?

a) Joanne withdrew \$10, and then deposited \$30 in her bank account.

b) Tom deposited \$10, and then withdrew \$30 from his bank account.

c) Mary deposited \$15, and then withdrew \$15 from her bank account.

Extra Practice 4A**Lesson 2.4: Subtracting Integers with Tiles**

1. Use tiles to subtract.

a) $(+9) - (+2)$ **b)** $(-9) - (+2)$ **c)** $(+4) - (+7)$

d) $(-5) - (-3)$ **e)** $(+5) - (-2)$ **f)** $(-6) - (-4)$

2. Subtract.

a) $(+6) - (+2)$ **b)** $(+5) - (-3)$ **c)** $(-9) - (+3)$

d) $(-8) - (-4)$ **e)** $(-6) - (-5)$ **f)** $(-6) - (-6)$

3. What should you subtract from each integer to get the answer +2?

a) +9 **b)** +1 **c)** -4 **d)** 0

4. What should you subtract from each integer to get the answer -3?

a) +4 **b)** -2 **c)** -7 **d)** -10

5. Use integers.

Write a subtraction equation that would give each answer.

a) +1 **b)** -2 **c)** +3 **d)** -4

6. Which expression in each pair has the lesser value?

a) i) $(-4) - (+1)$ **ii)** $(+4) - (-1)$

b) i) $(+2) - (+3)$ **ii)** $(-2) - (-3)$

Extra Practice 5A**Lesson 2.5: Subtracting Integers on a Number Line**

1. Use a number line to subtract.

a) $(+7) - (+3)$ **b)** $(-7) - (+3)$ **c)** $(+5) - (+14)$

d) $(-6) - (-4)$ **e)** $(-5) - (+8)$ **f)** $(-4) - (-11)$

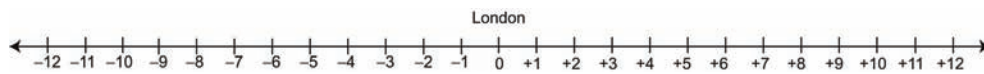
2. Use patterns to subtract.

a) $(+6) - (-2)$
Start with $(+6) - (+2)$.

b) $(-4) - (+6)$
Start with $(+7) - (+6)$.

c) $(+3) - (+7)$
Start with $(+8) - (+7)$.

3. The World Standard Time Zones are like a number line from -12 to $+12$.



What is the time difference between:

a) Amsterdam (zone $+1$) and Calgary (zone -7)?

b) Winnipeg (zone -6) and Whitehorse (zone -8)?

c) Beijing (zone $+8$) and Rio de Janeiro (zone -3)?

4. The difference between $(+37)$ and $(+43)$ is -6 .

a) Write the subtraction statement.

b) Write another subtraction statement using two negative integers with this difference.

c) Write another subtraction statement using a positive integer and a negative integer with this difference.

Extra Practice Sample Answers

Extra Practice 1A

Lesson 2.1

- 5
 - +3
 - 1
 - 3
 - +4
 - 0
- Answers will vary. For example:
 - $\begin{array}{cccc} \boxed{Y} & & & \\ \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \end{array}$ or $\begin{array}{ccccccc} \boxed{Y} & \boxed{Y} & \boxed{Y} & & & & \\ \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \end{array}$
 - $\begin{array}{cccccccc} \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} \\ \boxed{R} & \boxed{R} & & & & & & \end{array}$ or $\begin{array}{ccccc} \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} \\ \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \end{array}$
 - $\begin{array}{cccccc} \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \end{array}$ or $\begin{array}{c} \boxed{Y} \\ \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \end{array}$
 - $\begin{array}{cc} \boxed{Y} & \boxed{Y} \\ \boxed{R} & \boxed{R} \end{array}$ or $\begin{array}{c} \boxed{Y} \\ \boxed{R} \end{array}$
- 1
 - +4
 - 0
 - 38
- 2
 - 8
 - 6 yellow tiles
 - 5 red tiles

Extra Practice 2A

Lesson 2.2

- $(+3) + (-6) = -3$
 - $(+5) + (-2) = +3$
 - $(+1) + (-4) = -3$
 - $(+4) + (-4) = 0$
- $(+4) + (-2) = +2$
 - $(-8) + (+1) = -7$
 - $(+6) + (-16) = -10$
 - $(+24) + (-37) = -13$
- $(+3) + (-1) = +2$
 $\begin{array}{ccc} \boxed{Y} & \boxed{Y} & \boxed{Y} \\ \boxed{R} & & \end{array}$
 - $(+3) + (-4) = -1$
 $\begin{array}{cccc} \boxed{Y} & \boxed{Y} & \boxed{Y} & \\ \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \end{array}$
 - $(-7) + (-2) = -9$
 $\begin{array}{cccccc} \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \\ \boxed{R} & \boxed{R} & & & & & \end{array}$
 - $(+2) + (+4) = +6$
 $\begin{array}{cc} \boxed{Y} & \boxed{Y} \\ \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} \end{array}$
 - $(-2) + (+5) = +3$
 $\begin{array}{ccccc} \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} & \boxed{Y} \\ \boxed{R} & \boxed{R} & & & \end{array}$
 - $(-7) + (-7) = -14$
 $\begin{array}{cccccc} \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \\ \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} & \boxed{R} \end{array}$
- $(+100) + (-27) = +73$
Jose has \$73 left in his bank account.
 - $(-4) + (+19) = +15$
The elevator rose 15 levels from where it was originally.
 - $(+4) + (-10) = -6$
The temperature has dropped 6°C from what it was originally.
 - $(+4) + (-2) = +2$
The value of the dollar rose a total of 2¢ from what it was originally.

5.

Hole Number	1	2	3	4	5	6	7	8	9
Score	-3	+1	0	-1	+3	-2	-1	0	+4
Cumulative Score	-3	-2	-2	-3	0	-2	-3	-3	+1

The golfer found the first hole the easiest and the last hole hardest.

Extra Practice 3A**Lesson 2.3**

- | | | |
|-------|-------|-------|
| a) +2 | b) -7 | c) -2 |
| d) -3 | e) +3 | f) -5 |
- | | |
|------------------------|------------------------|
| a) $(+5) + (-13) = -8$ | b) $(-6) + (+7) = +1$ |
| c) $(-6) + (-2) = -8$ | d) $(+8) + (-3) = +5$ |
| e) $(-3) + (-4) = -7$ | f) $(+9) + (-14) = -5$ |
- a) $(-10) + (+30) = +20$
Joanne has had a \$20 increase in her bank account.

b) $(+10) + (-30) = -20$
Tom has had a \$20 reduction in his bank account.

c) $(+15) + (-15) = 0$
Mary has had no change in the amount of money in her bank account.

Extra Practice 4A**Lesson 2.4**

- | | | |
|-------|--------|-------|
| a) +7 | b) -11 | c) -3 |
| d) -2 | e) +7 | f) -2 |
- | | |
|------------------------|-----------------------|
| a) $(+6) - (+2) = +4$ | b) $(+5) - (-3) = +8$ |
| c) $(-9) - (+3) = -12$ | d) $(-8) - (-4) = -4$ |
| e) $(-6) - (-5) = -1$ | f) $(-6) - (-6) = 0$ |
- | | | | |
|-------|-------|-------|-------|
| a) +7 | b) -1 | c) -6 | d) -2 |
|-------|-------|-------|-------|
- | | | | |
|-------|-------|-------|-------|
| a) +7 | b) +1 | c) -4 | d) -7 |
|-------|-------|-------|-------|
- Answers will vary. For example:

a) $(+5) - (+4) = +1$	b) $(-6) - (-4) = -2$
c) $(-1) - (-4) = +3$	d) $(-1) - (+3) = -4$
- | | |
|--------------------------|------------------------|
| a) i) $(-4) - (+1) = -5$ | ii) $(-4) - (-1) = -3$ |
|--------------------------|------------------------|

The first expression has the lesser value.

b) i) $(+2) - (+3) = -1$	ii) $(-2) - (-3) = +1$
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The first expression has the lesser value.

Extra Practice 5A**Lesson 2.5**

- | | | |
|-------|--------|-------|
| a) +4 | b) -10 | c) -9 |
| d) -2 | e) -13 | f) +7 |
- | | |
|-----------------------|-----------------------|
| a) $(+6) - (+2) = +4$ | b) $(+7) - (+6) = +1$ |
| $(+6) - (+1) = +5$ | $(+6) - (+6) = 0$ |
| $(+6) - (0) = +6$ | $(+5) - (+6) = -1$ |
| $(+6) - (-1) = +7$ | $(+4) - (+6) = -2$ |
| $(+6) - (-2) = +8$ | $(+3) - (+6) = -3$ |
| | $(+2) - (+6) = -4$ |
| c) $(+8) - (+7) = +1$ | $(+1) - (+6) = -5$ |
| $(+7) - (+7) = 0$ | $(+0) - (+6) = -6$ |
| $(+6) - (+7) = -1$ | $(-1) - (+6) = -7$ |
| $(+5) - (+7) = -2$ | $(-2) - (+6) = -8$ |
| $(+4) - (+7) = -3$ | $(-3) - (+6) = -9$ |
| $(+3) - (+7) = -4$ | $(-4) - (+6) = -10$ |
- | | |
|------------------------|-----------------------|
| a) $(+1) - (-7) = +8$ | b) $(-6) - (-8) = +2$ |
| c) $(+8) - (-3) = +11$ | |
- | | |
|-------------------------|-------------------------|
| a) $(+37) - (+43) = -6$ | b) $(-40) - (-34) = -6$ |
| c) $(-3) - (+3) = -6$ | |