

4.10 Unit Review

Unit 4: Integers and the Coordinate Plane

Name: _____

Date: _____

Class/Period: _____

Problem 4.135 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Write an integer for 22 degrees below zero.

Problem 4.136 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Write an integer for a deposit of 85 dollars.

Problem 4.137 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Write an integer for a loss of 13 yards.

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Problem 4.138 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Which is greater: -17 or -9 ?

Problem 4.139 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Order $-4, 7, 0, -11, 3$ from least to greatest.

Problem 4.140 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Consecutive ticks differ by 4. Find the point three ticks right of -18 .

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Problem 4.141 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Find the opposite of -36 .

Problem 4.142 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Simplify $-(-(-12))$.

Problem 4.143 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

If $-a = 15$, find a .

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Problem 4.144 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Find two opposite numbers 24 units apart.

Problem 4.145 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Evaluate $-(-(-(-2.5)))$.

Problem 4.146 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Explain why zero is its own opposite.

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Problem 4.147 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Write $-3\frac{5}{8}$ as a decimal.

Problem 4.148 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Write -4.2 as a mixed number.

Problem 4.149 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Between which integers does $-\frac{17}{4}$ lie?

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Problem 4.150 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

A unit interval is divided into eighths. Name the fifth tick right of -2 .

Problem 4.151 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Are -2.375 and $-2\frac{3}{8}$ the same point?

Problem 4.152 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Three equal intervals separate -1.8 and -0.6 . Find the interval size.

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Problem 4.153 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

$$|-24|$$

Problem 4.155 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Solve $|x| = 11$.

Problem 4.154 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

$$-|-6.8|$$

Problem 4.156 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Find the distance between -12 and 7 .

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Problem 4.157 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Find all points 5 units from -2 .

Problem 4.158 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Which is farther from zero: -8.6 or 8.4 ?

Problem 4.159 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Compare $-\frac{7}{8}$ and -0.9 .

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Problem 4.160 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Compare $-2\frac{1}{3}$ and -2.3 .

Problem 4.161 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Compare $-|4|$ and $|-3.9|$.

Problem 4.162 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Order -1.2 , $-\frac{5}{4}$, $-1\frac{1}{8}$ least to greatest.

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Problem 4.163 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

List every integer satisfying $-3.5 < n < 4.2$.

Problem 4.165 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Graph $x < -3$.

Problem 4.164 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Write a rational number between $-\frac{2}{3}$ and -0.65 .

Problem 4.166 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Graph $x \geq 2$.

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Problem 4.167 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Write the inequality: open point at 5, shade right.

Problem 4.168 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Write the inequality: closed point at -4 , shade left.

Problem 4.169 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Which integers from -4 to 4 satisfy $x > -1$?

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Problem 4.170 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Translate and graph: the temperature is at most 6 degrees.

Problem 4.171 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Identify the quadrant of $(-7, 4)$.

Problem 4.172 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Identify the axis containing $(0, -8)$.

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Problem 4.173 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Reflect $(3, -5)$ across the x -axis.

Problem 4.174 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Reflect $(-4, 2)$ across the y -axis.

Problem 4.175 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Reflect $(-6, -1)$ across the origin.

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Problem 4.176 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Find the missing rectangle vertex: $(2, 5)$, $(-3, 5)$, $(2, -4)$.

Problem 4.177 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Find the distance from $(-5, 2)$ to $(8, 2)$.

Problem 4.178 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Find the distance from $(3, -7)$ to $(3, 6)$.

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Problem 4.179 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Find all points 4 units horizontally from $(1, -2)$.

Problem 4.180 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

A rectangle has opposite vertices $(-3, 4)$ and $(5, -2)$. Find its area.

Problem 4.181 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Find the perimeter of the rectangle in the previous problem.

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Problem 4.182 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

A square has perimeter 28. Find its area.

Problem 4.183 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

A point P lies at -3.6 on a number line. Point Q is its opposite. Find PQ .

Problem 4.184 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Order $-|2.4|$, $-\frac{5}{2}$, -2.45 , $|-2.3|$ from least to greatest.

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Problem 4.185 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

How many integers satisfy both $x > -6$ and $x \leq 3$?

Problem 4.186 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Point $A(-4, 3)$ is reflected across both axes. Find the image and the horizontal and vertical distances from A to the image.

Problem 4.187 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

An axis-aligned rectangle has width 9, height 4, and upper-right vertex $(2, 5)$. Find its other vertices.

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Problem 4.188 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

A number is 7 units from -2 , is greater than -2 , and is used as the endpoint of the inequality $x \leq a$. Find a and graph the inequality.

Problem 4.189 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

A submarine is at -85 meters. A research drone is at the opposite elevation relative to sea level. A sensor is halfway between them. Find all three elevations and the distances among consecutive locations.

Problem 4.190 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Five equally spaced points lie from $-4\frac{1}{2}$ to $1\frac{1}{2}$, including both endpoints. Find all five points and identify which are negative, zero, or positive.

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Problem 4.191 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

A graph represents all numbers greater than $-3\frac{1}{2}$ and at most 4. List the integer solutions, count them, and find their sum.

Problem 4.192 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

An axis-aligned rectangle has opposite vertices $(-6, 7)$ and $(4, -2)$. It is reflected across the y -axis. Find the image vertices, perimeter, and area.

Problem 4.193 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

A square has one vertex at $(-2, 3)$, sides parallel to the axes, and area 49. List every possible set of the other three vertices.

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Problem 4.194 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

Point $P = (a, b)$ is in Quadrant II and satisfies $|a| + |b| = 9$, where a, b are integers. List every possible point P , then reflect each across the origin.

Problem 4.195 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

A number line contains equally spaced points $A < B < C < D < E$. If $A = -3\frac{3}{4}$ and $E = 2\frac{1}{2}$, find B, C, D . Then graph the inequality whose solutions begin at C , include C , and extend right.

Problem 4.196 Directions:

The review begins with focused skills and ends with mixed reasoning. Show clear work, label graphs and units, and explain how number-line or coordinate structure supports each result.

An axis-aligned rectangle has one vertex at $(-5, 4)$, area 54, perimeter 30, and whole-number side lengths. Find every possible set of the other three vertices and explain how symmetry organizes the cases.