1) Bell Ringer: Start working on page 85- due Friday

2) Turn in homework- pages 73-74

3) Lesson: Consecutive Integer Word Problems

4) Homework: page 77

Over Break- pages 94-99 ←

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p. 75

Give an example of 2 consecutive integers? x $x+1$ 10, 11

Write 2 expressions to represent 2 consecutive integers. Let 1st integer = x, Let 2nd integer = $x+1$

What are consecutive even integers? Ex 12, 14

Write 2 expressions to represent 2 consecutive even integers. Let 1st integer = x, Let 2nd integer = $x+2$

What are consecutive odd integers? Ex 13, 15

Write 3 expressions to represent 3 consecutive odd integers. Let 1st integer = x, Let 2nd integer = $x+2$

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Demonstration:

Find two consecutive integers that add up to 109.

a.) Define the variable: Let 1st integer = x

b.) Give an expression to represent the other consecutive integer.

x + 1

c.) Set up and solve an equation to represent the two consecutive integers add up to 109.

d.) Write out your solution to answer the question.

x = 54

x + 1 = 55

Check 109 ✓

x + (x + 1) = 109

2x + 1 = 109

−1 −1

$\frac{2}{2}x = \frac{108}{2}$

x = 54

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Guided Practice:

Use the steps above to help you define and set up an equation to find the consecutive integers.

Determine two consecutive even integers whose sum is 30.

Let 1st integer = x

2nd integer = x + 2

x = 14

x + 2 = 16

30 ✓

x + (x + 2) = 30

2x + 2 = 30

−2 −2

$\frac{2x}{2} = \frac{28}{2}$

x = 14

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Demonstration:

Find three consecutive integers such that three times the largest is 9 less than four times the smallest.

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a.) Define the variables and expressions that are unknown:

1st integer = x
2nd integer = $x+1$
3rd integer = $x+2$

b.) Set up and solve an equation that represents the problem.

$3(x+2) = 4x - 9$
$3x + 6 = 4x - 9$
$-3x \quad -3x$
$6 = x - 9$
$+9 \quad +9$
$15 = x$

c.) Rewrite your solution to answer the question.

$x = 15$
$x+1 = 16$
$x+2 = 17$

check
$3(17) = 4(15) - 9$
$51 = 60 - 9$
$51 \checkmark$

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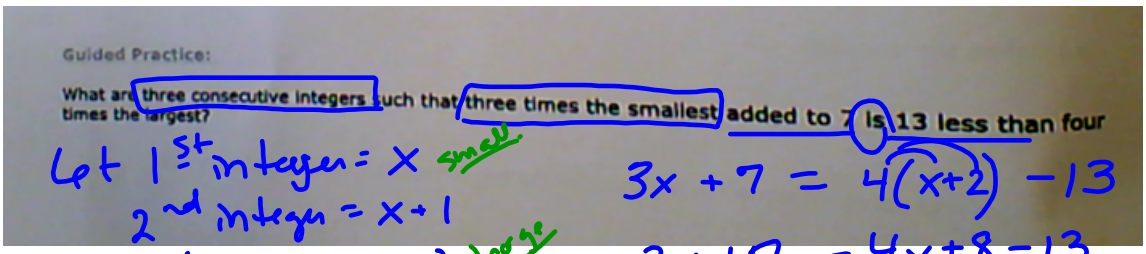

Let 1st integer = x smallest
2nd integer = x+1
3rd integer = x+2 largest

$3x + 7 = 4(x+2) - 13$

$3x + 7 = 4x + 8 - 13$

$3x + 7 = 4x - 5$

$-3x \quad -3x$

$7 = x - 5$

$+5 \quad +5$

$12 = x$

$x = 12$

$x+1 = 13$

$x+2 = 14$

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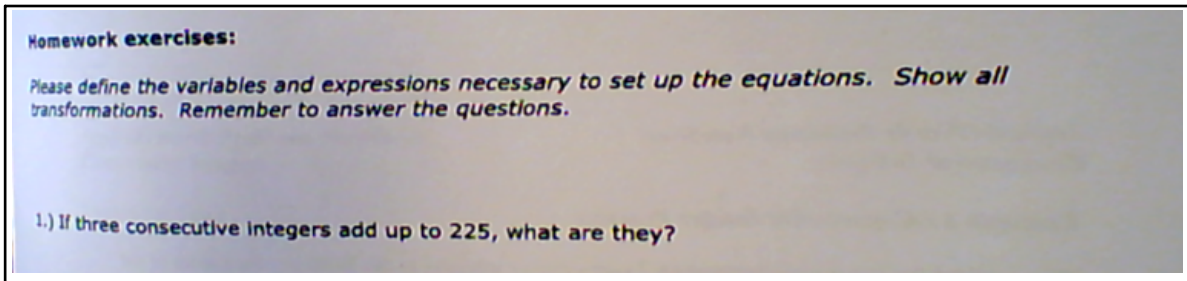

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2.) Four consecutive integers add up to 98. Find them.

3.) Find three consecutive even integers such that four times the smallest is 108 less than five times the largest.

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4.) Find three consecutive even integers such that twice the second is 34 more than the largest integer.

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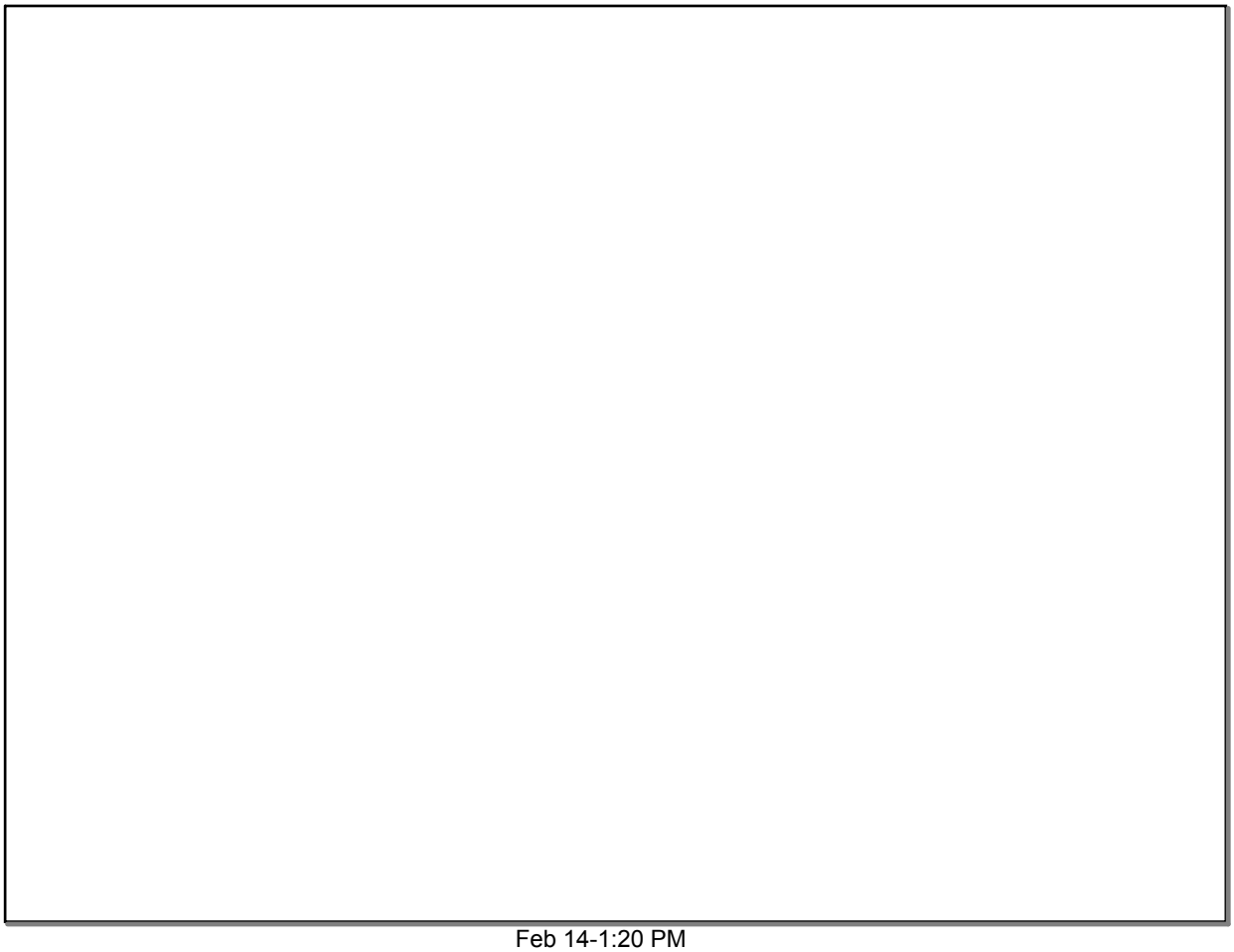

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