ALEKS® FND M010 - Review Pack #1

Basic Math / FND M010 Spring 16 – FC3_26302-Johnson T-04N40FD301 (Mr. Thomas)

Student Name/ID:

1. Write the number for *ninety-four million ten thousand* .

2. Round $4,133$ to the nearest hundred.

3. Estimate $1258+670+500$ by first rounding each number to the nearest hundred.

4. Estimate $4196 \div 53$ by first rounding each number so that it has only 1 nonzero digit.

5. For each number below, is it even or odd?

	Odd	Even
878	○	○
87	○	○
265	○	○
70	○	○
44	○	○

6. Write 99 as a product of prime factors.

7. Find the greatest common factor of 24 and 42.

8. Find the least common multiple of 6, 5, and 10.

9. The first three terms of an arithmetic sequence are as follows.

$44, 35, 26$

Find the next two terms of this sequence.

10. The sequence of figures shows a pattern.
If the pattern repeats, how many small squares will Figure 4 have?

Figure 1

Figure 2

Figure 3

11. Evaluate the expression when $y = 6$ and $x = 7$.

$x + 5y$

12. Solve for u.

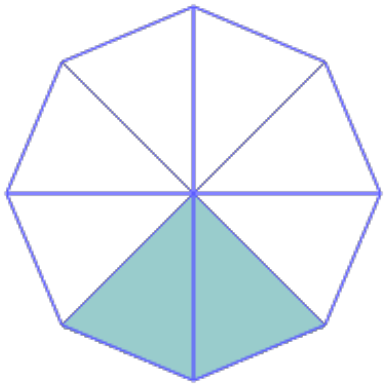
$5 = u - 3$

13. Solve for x.

$$72 = 3x + 12$$

Simplify your answer as much as possible.

14. The figure below is cut into 8 equal pieces.
What fraction of the figure is shaded?



15. The strip below is cut into 9 equal bars.

Shade $\frac{2}{3}$ of this strip.

16. What is the position of D on the number line below?

Write your answer as a fraction or mixed number.

17. Order these fractions from least to greatest.

$$\frac{2}{12}, \frac{2}{6}, \frac{2}{8}$$

18. Use $<$, $>$, or $=$ to compare the following decimals.

$1.25 \square 1.23$

$0.2 \square 0.04$

$0.4 \square 0.40$

19. There are 11 apples in a basket. 3 of these apples are green. The rest of them are red.

(a) What is the ratio of all apples in the basket to red apples?

(b) What is the ratio of green apples to red apples?

20. Bob paid $\$13.29$ for a 7.03-kg bag of dog food. A few weeks later, he paid $\$13.58$ for a 7.26-kg bag at a different store.

Find the unit price for each bag. Then state which bag is the better buy based on the unit price.

Round your answers to the nearest cent.

Unit price for the 7.03-kg bag:

$\$$_____ per kg

Unit price for the 7.26-kg bag:

$\$$_____ per kg

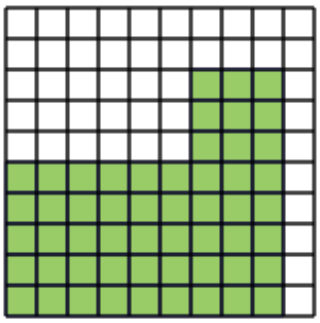
The better buy:

- The 7.03-kg bag
- The 7.26-kg bag
- Neither (They have the same unit price)

21. Ivan drove 936 miles in 13 hours.
At the same rate, how many miles would he drive in 11 hours?

22. The figure below is divided into 100 squares of equal size.

What percent of the figure is shaded?



23. Answer the following questions.

(a) 34 is 85% of what? ____

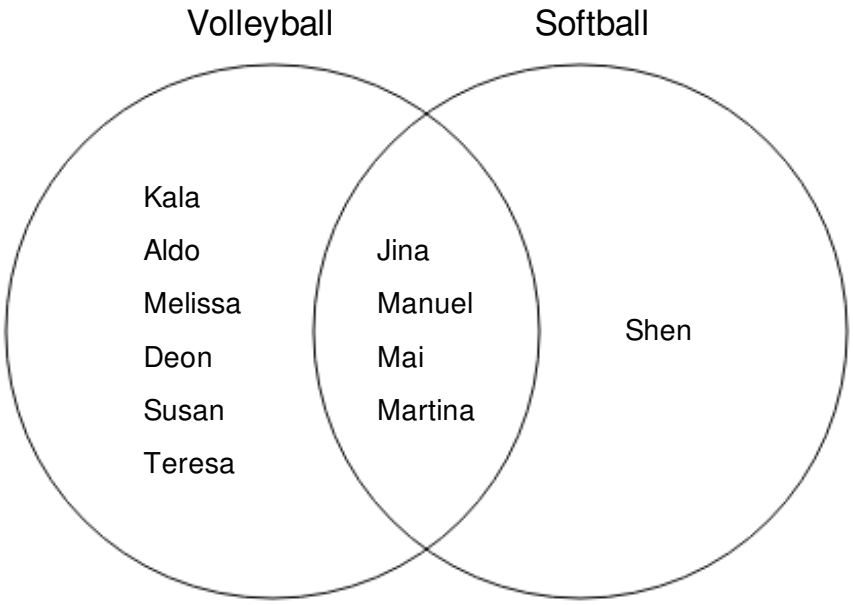
(b) 35% of 80 is what number? ____

24. The price of an item has dropped to $\$36$ today. Yesterday it was $\$120$. Find the percentage decrease.

25. (a) An angle measures $31°$. What is the measure of its supplement?

(b) An angle measures $49°$. What is the measure of its complement?

26. The Venn diagram shows the memberships for the Volleyball Club and the Softball Club. Use the diagram to answer the questions below.

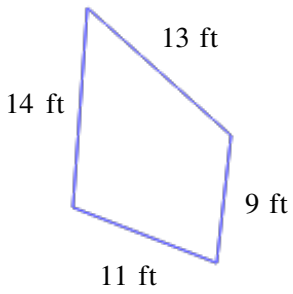


(a) How many people play Volleyball?

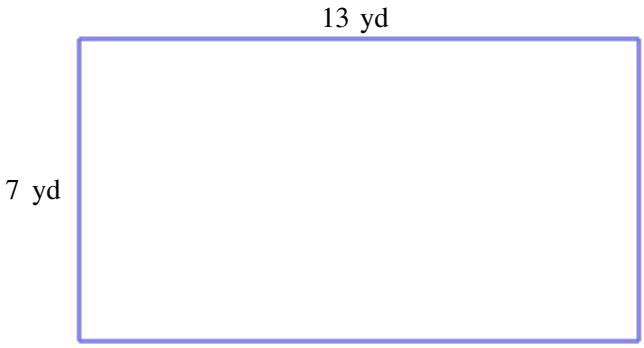
(b) How many people play both Volleyball and Softball?

(c) How many people play Softball but not Volleyball?

27. Find the perimeter of the following polygon. Be sure to include the correct unit in your answer.



28. Find the area of this rectangle.

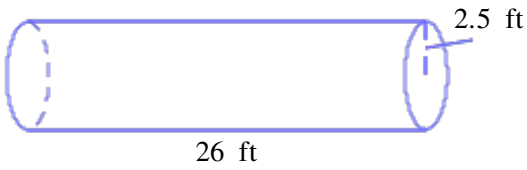


29. The radius of a circle measures 7 ft. What is the circumference of the circle?

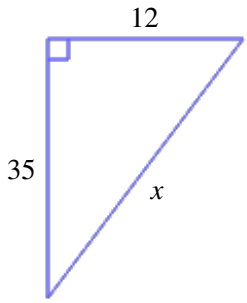
Use 3.14 for π, and do not round your answer. Be sure to include the correct unit in your answer.

30. The radius of a cylindrical construction pipe is 2.5 ft. If the pipe is 26 ft long, what is its volume?

Use the value 3.14 for π, and round your answer to the nearest whole number.
Be sure to include the correct unit in your answer.



31. For the following right triangle, find the side length x.

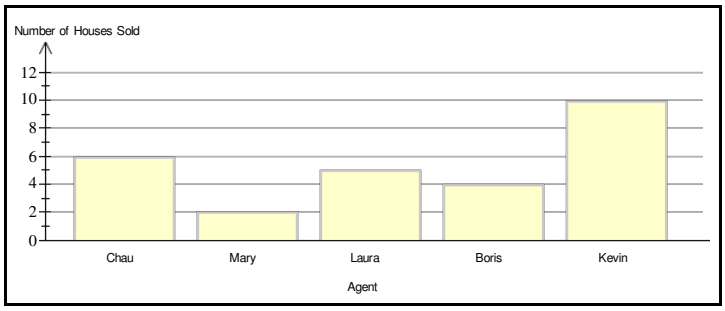


32. Hong is on the swim team. Each week he swims a total of 4000 meters. How many kilometers does he swim each week?

Be sure to include the correct unit in your answer.

33. Today is Rachel's birthday. She is 6 years old. How old is Rachel in months?

34. A local real estate company has 5 real estate agents. The number of houses that each agent sold last year is shown in the bar graph below. Use this bar graph to answer the questions.



(a) Which agent sold the most houses? How many houses did that agent sell?

(b) How many more houses did Chau sell than Mary?

(c) How many agents sold fewer than 4 houses?

35. What is the average of 92 and 141?

36. A bag with 6 marbles is shown below. (2 marbles are black, 1 is white, and 3 are grey.) A marble is chosen from the bag at random. What is the probability that it is black?

Write your answer as a fraction in simplest form.

37. Evaluate the following.

$$\left|-15\right| = \square$$
$$\left|9\right| = \square$$

38. Evaluate.

$$-9^2 = \square$$

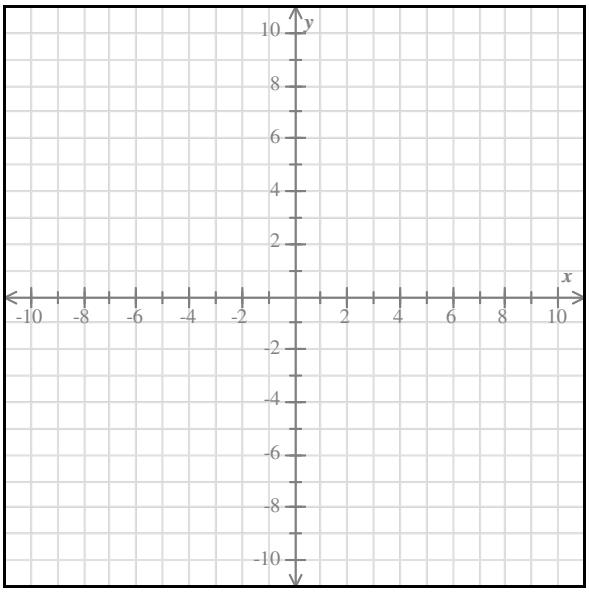
$$-(-2)^3 = \square$$

39. Write 659 in scientific notation.

40. Use the distributive property to remove the parentheses.

$$6(w+5)$$

41. Graph the line whose y-intercept is -9 and whose x-intercept is -2.

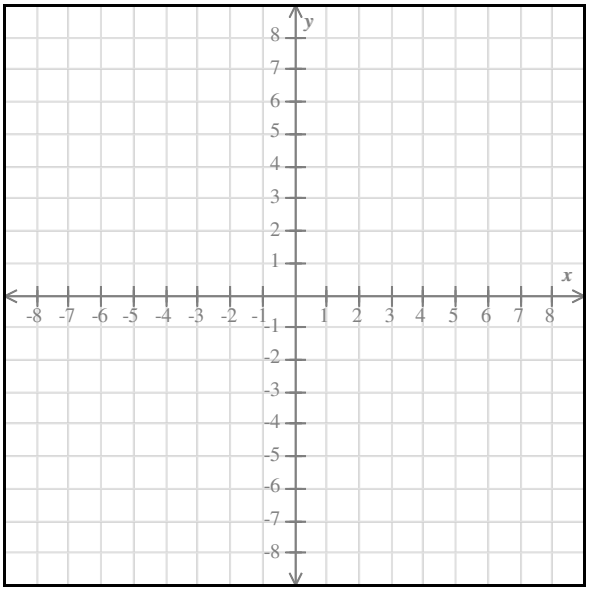


42. Translate this phrase into an algebraic expression.

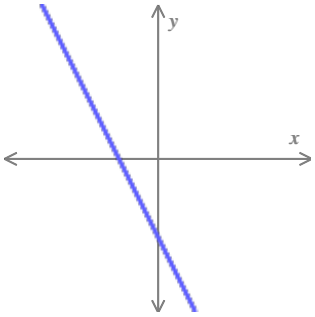
Four more than the product of 23 *and Greg's height*

Use the variable g to represent Greg's height.

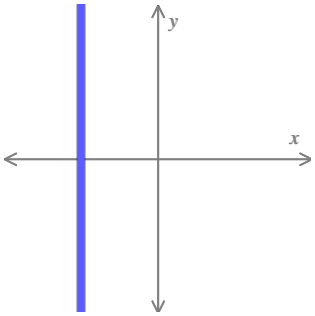
43. Using the pencil, plot the point $(4, -3)$.



44. For each line, determine whether the slope is positive, negative, zero, or undefined.



_ Positive
_ Negative
_ Zero
_ Undefined



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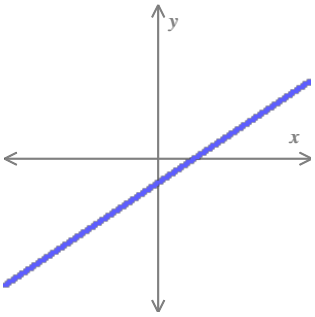

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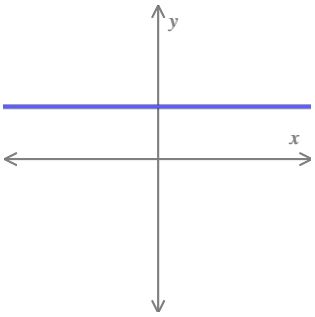


_ Positive
_ Negative
_ Zero
_ Undefined

45. Simplify.

$$(6u)^2$$

Write your answer without parentheses.

46. Find the slope of the line passing through the points $(-9,\ -6)$ and $(-4,\ 5)$.

47. Simplify.

$$\frac{14wxy}{21xy}$$

FND M010 - Review Pack #1 Answers for class Basic Math / FND M010 Spring 16 – FC3_26302-Johnson T-04N40FD301

1. 94,010,000

2. 4,100

3. 2500

4. 80

5.	Odd	Even
878	○	◉
87	◉	○
265	◉	○
70	○	◉
44	○	◉

6. $99 = 3 \times 3 \times 11$

7. 6

8. 30

9. 44, 35, 26, 17, 8

10. 4

11. 37

12. $u = 8$

13. $x = 20$

14. $\frac{2}{8}$

15.

16. $1\frac{3}{4}$

17. $\frac{2}{12} < \frac{2}{8} < \frac{2}{6}$

18. $1.25 > 1.23$

$0.2 > 0.04$

$0.4 = 0.40$

19. (a) $11 : 8$

(b) $3 : 8$

20.

Unit price for the 7.03-kg bag: $\$1.89$ per kg

Unit price for the 7.26-kg bag: $\$1.87$ per kg

The better buy:

- ○ The 7.03-kg bag
- ◉ The 7.26-kg bag
- ○ Neither (They have the same unit price)

21. 792 miles.

22. 54%

23. (a) 34 is 85% of what? 40

(b) 35% of 80 is what number? 28

24. $70\ \%$

25. measure of the supplement: $149°$
measure of the complement: $41°$.

26.

(a) How many people play Volleyball?
10

(b) How many people play both Volleyball and Softball?
4

(c) How many people play Softball but not Volleyball?
1

27. 47 ft

28. $91\ \text{yd}^2$

29. 43.96 ft

30. $510\ \text{ft}^3$

31. 37

32. 4 km

33. 72 months

34.

(a) Which agent sold the most houses?
Kevin

How many houses did that agent sell?
10 house(s)

(b) How many more houses did Chau sell than Mary?
4 more house(s)

(c) How many agents sold fewer than 4 houses?
1 agent(s)

35. 116.5

36. $\frac{1}{3}$

37. $|-15| = 15$

$|9| = 9$

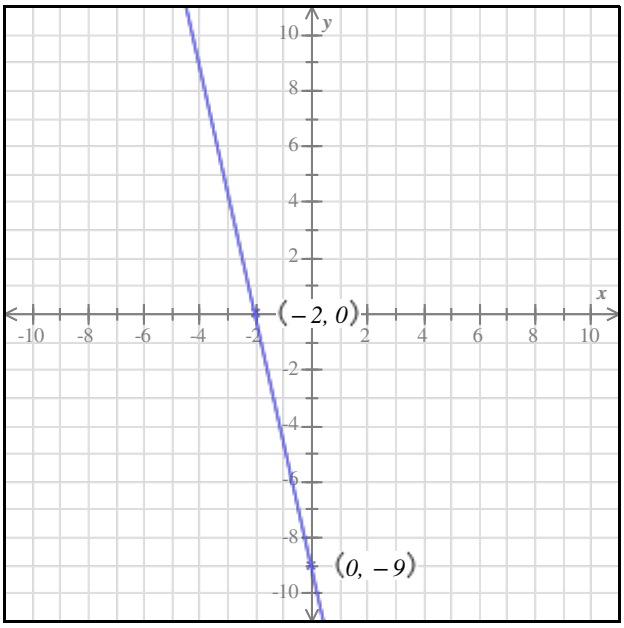
38. $-9^2 = -81$

$-(-2)^3 = 8$

39. 6.59×10^2

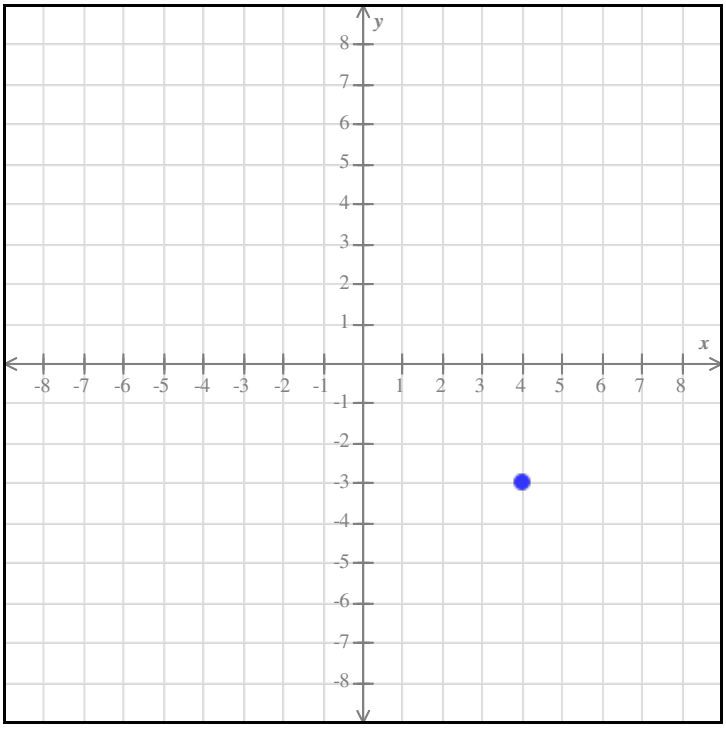
40. $6w + 30$

41.

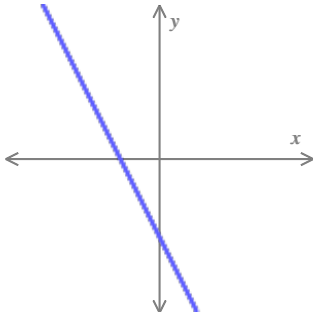


42. $23g+4$

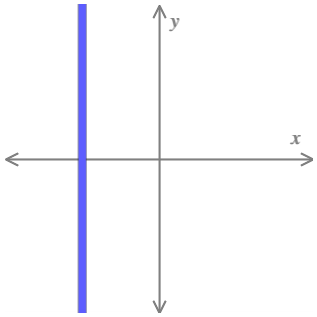
43.



44.



_ Positive
x Negative
_ Zero
_ Undefined



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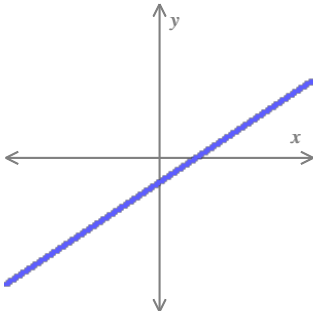

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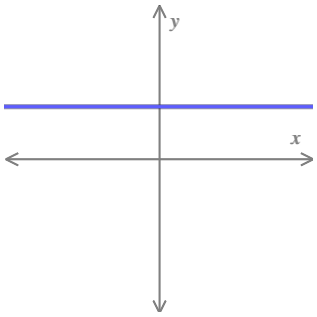

_ Positive
_ Negative
x Zero
_ Undefined

45. $36u^2$

46. $\frac{11}{5}$

47. $\frac{2w}{3}$