

# IMA Summer Assignment

Good. Better. Best.

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

SCORE: \_\_\_\_\_

**What:** This is a mandatory packet that will both review the content we studied in IMA and prepare you for your upcoming math class. It will be graded for accuracy and completion by your math teacher next school year. The content is organized such you can use Khan Academy or IXL if you want more practice.

**Why:** Just like the muscles you would use to play an instrument or play sports, your brain is a muscle that needs practice. In your humanities course you will probably have a summer reading assignment. This will help your reading skills stay strong throughout the summer. It is important to do the same with mathematics. While we math teachers are convinced that you do math all the time without realizing it, we also want to give you some practice that is a little more like what you see while you are in school. If you do not do any math all summer you're math muscles will get weak and soft! Instead, you should do this assignment to keep your math muscles strong so that you can be ready for next school year.

**When:** While it is worthwhile to do this packet at any point this summer, your math teacher will be really happy if you spread out the work over the summer. Your muscles will be much stronger if you do some practice every week rather than if you were to do one intense workout and nothing the rest of the summer (ask Ms. Russo, it's true!). So, below is a schedule to help you organize your practice and get you ready for your math class next year. For credit you should plan to turn this packet in on the **first** day of the next school year **Wednesday August 28<sup>th</sup> 2019** with any scrap paper you used to answer any of the questions. Show all of your thinking. Have a great summer!

1. Compute Multi-Digit Numbers (June 24 – 28)
2. Multiply and Divide Fractions (July 8 – 12)
3. Ratios and Rates (July 15 – 19)
4. Equations (July 22 – 26)
5. Inequalities (July 29 – August 2)
6. Geometry (August 5 – 9)
7. Decimals, Fractions, Percent's (August 12 – 16)
8. Integers (August 19 – 23)

## Compute Multi-Digit Numbers

Solve for the exact product and quotient. Is your answer reasonable? Yes or No. (Use estimation to check)

1.  $12.1 \times 2.95$

2.  $60.94 \div 5.7$

### Solve

3. The temperature in a city on a Monday was 78.3 degrees Fahrenheit. On Tuesday, the temperature was 87.1 degrees Fahrenheit. How much higher was the temperature on Tuesday?
- A. 8 degrees                                      C. 9.2 degrees  
B. 8.8 degrees                                    D. 9.8 degrees

4. Bananas cost \$0.54 per pound and grapes cost \$1.28 per pound. Leanne bought 2.6 pounds of bananas and 3.1 pounds of grapes. How much did she pay for the bananas and grapes?
- A. \$1.82                      B. \$2.68                      C. \$4.54                      D. \$5.37

5. What is the next term in the pattern shown below?
- i. 4.5, 9, 13.5, 18, ...

- A. 4.5                                      C. 22.5  
B. 22.4                                    D. 23

**Complete the words problems (HINT: What do you know? and What do you need to find?)**

6. There are 632 students going on a school field trip. Each bus can carry 48 students. How many buses should the school reserve? Explain your reasoning.
7. Mr. Shaw wants to replace the flooring in his family room. The floor has an area of 262.8 square feet. If the room is 18 feet long, how wide is it? Justify your procedure.
8. Nina's sister has 386 stickers that she wants to put in a book. Each page can hold 42 stickers. How many pages will she need? Explain your reasoning.

## Multiply and Divide Fractions

What is the value of each expression in simplest form?

9.  $12 \times \frac{1}{8}$

10.  $\frac{5}{6} \times \frac{7}{10}$

11.  $1\frac{2}{3} \times 2\frac{3}{5}$

12. Ms. Liang is building a deck that is  $2\frac{2}{9}$  yards long and  $3\frac{2}{5}$  yards wide. What is the area of her deck?  
(HINT: The deck is a rectangle)

13. Use the *draw a diagram* strategy to solve. Leon read  $\frac{5}{7}$  of the pages in his book. He has 28 pages left to read. How many pages did he read already?



What is the value of each expression in simplest form? (HINT: Whip and Nae Nae)

14.  $8 \div \frac{1}{3}$

15.  $9 \div \frac{3}{5}$

16.  $\frac{1}{2} \div \frac{2}{3}$

17. Eight bricks are laid end to end along the edge of a flower bed. Each brick is  $8\frac{1}{2}$  inches long. How long is the row of bricks, in feet? (Hint 12 inches = 1 foot)

## Ratios and Rates

Find the GCF of each set of numbers.

18. 6, 12 \_\_\_\_\_

28, 42 \_\_\_\_\_

Find the LCM of each set of numbers.

19. 5, 6 \_\_\_\_\_

6, 8 \_\_\_\_\_

20. The table shows the number of trees at Citrus Orchards. What is the ratio of orange trees to the total number of trees?

Citrus Orchard	
Trees	Amount of Trees
Lemon	30
Lime	14
Orange	12

Find the unit rate. (HINT: Use the GCF to find a denominator of 1)

21. 350 kilometers in 5 hours

22. \$80 for 16 tickets

23. It took Jaivin 18 minutes to jog 4 laps. How many minutes did it take to jog each lap at this rate?

24. A customer at a raceway can drive around the track 54 times for \$12. At this rate, how many times can the customer drive around the track for \$8?

Number of Times Around Track	54		■
Cost (\$)	12		8

25. Nick can read 3 pages in 1 minute. Write the ordered pairs (number of minutes, number of pages read) for Nick reading 0, 1, 2, and 3 minutes.

## Equations

What is the solution of each equation?

26.  $\frac{d}{75} = 25$

27.  $y + \frac{1}{2} = \frac{3}{4}$

28.  $13.2 = t - 4.4$

29.  $18 = \frac{2}{5}f$

30.  $27 = \frac{z}{0.3}$

31.  $5x = 15$

32.  $2s = 34$

33. For every quarter spent, Reggie receives 50 food pebbles to feed the fish at a hatchery. Reggie has thrown 350 food pebbles into the fish pools. Write and solve an equation to find the number of quarters Reggie spent at the hatchery.

34. Mercedes is 132 centimeters tall. This is twice the height of her younger brother. How tall is her younger brother?

- A.** 27 cm    **B.** 66 cm    **C.** 71 cm    **D.** 140

35. Find the rule for each function table.

Input (x)	Output (y)
1	3
2	4
4	6

Input (x)	Output (y)
0	0
3	9
6	18

Input (x)	Output (y)
4	1
8	2
12	3

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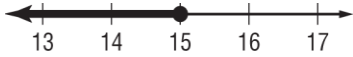
## Inequalities

Write an inequality for each sentence.

36. A maximum ceiling height of 8 feet was required in the new buildings.

37. A minimum number of 12 participants is required to hold a bike rally

38. Which inequality is graphed below?



- A.  $x \geq 15$       B.  $x < 15$       C.  $x \leq 15$       D.  $x > 15$

39. Which of the following is a solution of the inequality  $m - 12 < 20$ ?

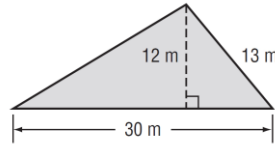
- A. 34      B. 33      C. 32      D. 31

## Geometry

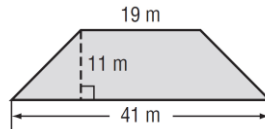
Find the area of the figures.

40. What is the area of the triangle?

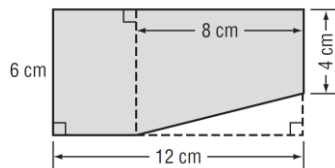
- A.  $180 \text{ m}^2$   
B.  $225 \text{ m}^2$   
C.  $360 \text{ m}^2$   
D.  $450 \text{ m}^2$



41. What is the area of the trapezoid?



42. What is the area of this composite figure? What shapes do you see?



43. What is the length of the base of a parallelogram with height 5.6 meters and an area of 39.2 square meters?

## Decimals, Fractions & Percents

44. What is 2.6% written as a decimal?

45. The library surveyed 240 people about their favorite type of movie. If 15% of the people chose documentaries, how many people chose documentaries?

46. The original price of a jacket is \$68. The sale price is 30% off the original price. What is the amount off the original price?

47. Which of the following orders  $\frac{2}{3}$ , 25%,  $\frac{3}{5}$ , and 0.40 from least to greatest?

48. What is 15.08 written as a mixed number?

A.  $15\frac{18}{100}$

B.  $15\frac{2}{25}$

C.  $15\frac{2}{25}$

D.  $15\frac{2}{50}$

**Write each fraction as a percent.**

49.

$$\frac{37}{50}$$

$$\frac{3}{25}$$

**Write each percent as a decimal and as a mixed number or fraction in simplest form.**

50.

185%

0.35%

51. During a basketball game, Jorell attempted 40 shots and made 18. He says he made 40% of the shots he took. Is Jorell correct? Explain your reasoning.

52. The original price of a DVD is \$9. The sale price is 20% off the original price. What is the sale price of the DVD?

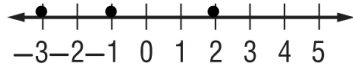
## Integers

Write the letter for the correct answer in the blank at the right of each question.

53. Which of the following statements is true?

- A.  $2 < -3$       B.  $-4 < -5$       C.  $-4 > -5$       D.  $-3 > 2$

54. Which set of integers is graphed on the number line?



- A.  $\{3, -1, 2\}$     B.  $\{-3, 1, -2\}$       C.  $\{-3, -1, 2\}$       D.  $\{-2, -1, 3\}$

55. Which expression has the greatest value?

- A.  $-|-16|$     B.  $|-14|$       C.  $-|-12|$       D.  $|10|$

56. What is the value of the expression  $|-36| + |7|$ ?

- A. -43      B. -29      C. 29      D. 43

57. Which integer best represents a withdrawal of \$85?

58. Write  $-\frac{5}{11}$  as a decimal.

- A.  $-0.\overline{4}$       B.  $-0.\overline{45}$       C. -0.48      D. -4.5

59. Order  $-3.98$ ,  $3\frac{8}{9}$ ,  $-3\frac{11}{12}$ , and  $3.\overline{9}$  from least to greatest on a number line.



60. What is the opposite of  $-132$ ?

61. Which integer represents a gain of 7 yards on a football play?

62. Which situation is *not* best described by a negative integer?

- A. a withdrawal of \$45      C. a loss of 12 yards  
B. a fine of \$15      D. a bonus of 10 point