

Summer Math Review 2017
For Section 7 Pre-Algebra

- *You should not use a calculator for this work.*
- *Work on a separate sheet of paper, except for questions 4, 7 and 19, which you should complete on this sheet.*
- *Show all work.*

1. Evaluate:

a. $\frac{5^2+3\cdot7}{8+2\cdot6}$

b. $4 + 3(7 - 5)$

2. Evaluate $8x - 7$ when $x = 9$.

3. Which is the correct expanded form of $2(a + b)$? (State the correct answer from the choices.)

- A** $2a + b$
- B** $2ab$
- C** $2a + 2b$
- D** $2 + ab$

4. Complete the following input-output table for the rule $y = 3x - 4$.

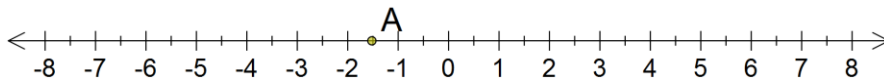
x	2	3	4	5	6
y					

5. These questions are about factors.
- List all the factors of 42 in increasing numerical order.
 - Group the factors of 42 into factor pairs.
 - Write the prime factorization of 90.
 - Find the GCF and LCM of 42 and 90.

6. These questions are about exponents.

- Evaluate 4^2 .
- Evaluate 2^5 .
- Write 1,000,000 as a power of 10.

7. Consider the following number line.



- What number is represented by the point A?
 - Plot -6 on the number line and call this point B.
 - Plot $2\frac{3}{4}$ on the number line and call this point C.
8. Evaluate the following using fraction operations:

a. $\frac{2}{3} + \frac{3}{5}$

b. $\frac{2}{3} - \frac{3}{5}$

c. $\frac{2}{3} \cdot \frac{3}{5}$

d. $\frac{2}{3} \div \frac{3}{5}$

9. Evaluate:

a. $1\frac{2}{3} + 2\frac{3}{4}$

b. $2\frac{3}{4} - 1\frac{2}{3}$

c. $2\frac{3}{4} \cdot 1\frac{2}{3}$

d. $2\frac{2}{5} \div 1\frac{1}{2}$

10. Evaluate:

a. $3 \div 0.3$

b. $1.2 + 3.7$

c. $1.2 \cdot 3.7$

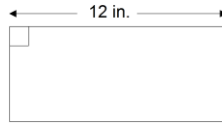
d. $5.4 - 1.8$

11. Your test scores for this year were 91, 82, 87, 76, 82, 94, 82 and 83.

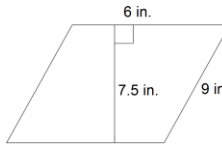
- i. What was the mean of your test scores?
- ii. What was the median of your test scores?
- iii. What was the mode of your test scores?
- iv. What was the range of your test scores?

12. These questions are about area.

- a. The rectangle has an area of 108 in^2 . What is its width?

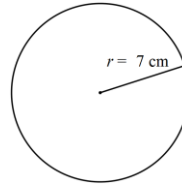


- b. Find the area of the parallelogram:



- c. For the following circle, find the

- i. diameter
ii. area in terms of π



13. These questions are about finding fractions between fractions, and decimals between decimals.

- a. Give a decimal between 0.6 and 0.7.
b. Give a fraction between $\frac{4}{5}$ and $\frac{7}{8}$, and write it in lowest terms.

14. These questions are about converting between decimals and fractions.

- a. Write 0.175 as a fraction in lowest terms.
b. Write $\frac{3}{50}$ as a decimal.

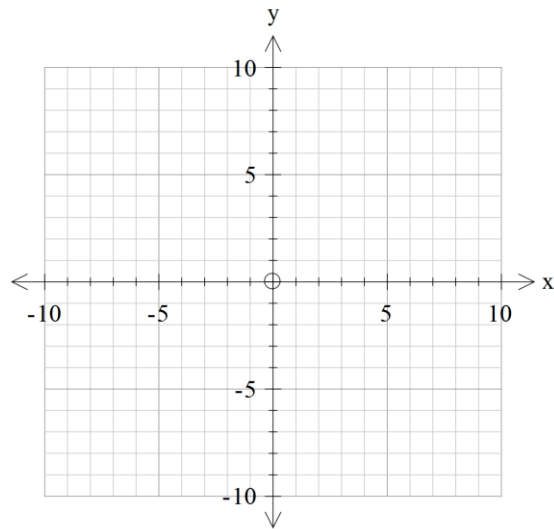
15. Simplify $\frac{12}{20}$.

16. Write $\frac{5}{7}$ as an equivalent fraction with a denominator of 35.

17. If I can buy 5 lbs of potatoes for \$3.00, what is the cost per pound?

18. Predict the next number in the pattern: 87, 81, 75, 69, 63

19. On the axes provided:



- a. Plot the point $(3, 7)$. Call it A.
 - b. Plot the point $(-2, 5)$. Call it B.
 - c. Plot the point $(8, -4)$. Call it C.
 - d. Name the quadrant that does not have a graphed point.
20. Shirts cost \$5 per shirt, plus a \$1 flat fee for shipping the entire order. How much will 12 shirts cost?
21. These questions are about percents.
- a. Find 15% of 120.
 - b. 20 is 40% of what number?
 - c. You got $37/40$ on your quiz. What was your score as a percent?