



Entering 6th Grade PreAlgebra

Summer Review Packet – 2018

DUE THE FIRST DAY OF CLASS

In preparation for the Fall Semester, this assignment is required to prepare you for your Pre-Algebra Course.

About Pre-Algebra:

Pre-Algebra I teaches students to think, reason, and communicate mathematically. Students use variables to determine solutions to real world problems and will learn geometry and probability concepts. Skills gained in Pre-Algebra provide students with a foundation for subsequent math courses.

SUPPLIES

Two composition books, loose leaf paper, two pocket folder, pencils/erasers, ruler, text, assignment pad, **basic calculator with square root key**, index cards. Graph paper will be provided.

Expectations of the Summer Packet:

The problems in this packet are designed to help you review topics that are important to your success in Pre-Algebra. **All work must be shown for each problem.** The problems should be done correctly, not just attempted.

The packet is due the first day of school. During the first week(s) of school, concepts in the packet will be reviewed.

All work should be completed and ready to turn in on the first day of classes.

Notes: The internet is a great resource... use it!

Some helpful sites:

www.coolmath.com

www.khanacademy.com

www.youtube.com

Current students: For assistance in completing this packet, the electronic subscription associated with last year's math textbook is still available for your use until Aug 31st.

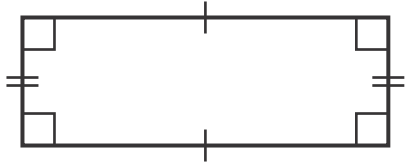
Enjoy your summer!

V. Roche, Math Dept. Chairperson E-mail: vroche@lacordaire.net

Benchmark Test 4 (Chapters 1–12)

Read each question. Fill in the correct answer.

1. What are all the ways in which the figure can be classified?



- Ⓐ quadrilateral, parallelogram
- Ⓑ quadrilateral, parallelogram, square, rectangle
- Ⓒ quadrilateral, parallelogram, square, rhombus, rectangle
- Ⓓ quadrilateral, parallelogram, rectangle

2. Lani represented the length of a beetle (centimeters) in expanded notation.

$$3 \times 1 + \left(4 \times \frac{1}{100}\right) + \left(5 \times \frac{1}{1,000}\right)$$

What is this number in standard form?

- Ⓐ 0.345
- Ⓑ 3.0405
- Ⓒ 3.045
- Ⓓ 3.45

3. A company assembles marble bags with 18 marbles to a bag. About how many bags does the company need for 730 marbles?

- Ⓐ 80 bags
- Ⓑ 50 bags
- Ⓒ 40 bags
- Ⓓ 30 bags

4. Erin hiked 5.6 miles in the morning and 4.25 miles in the afternoon. How many miles did she hike in all?

- Ⓐ 1.35 miles
- Ⓑ 1.45 miles
- Ⓒ 9.31 miles
- Ⓓ 9.85 miles

5. The most visitors to Yosemite National Park in one year is 4,190,557. What is the value of the digit 9 in this number?

- Ⓐ 900,000
- Ⓑ 90,000
- Ⓒ 900
- Ⓓ 90

6. A deli made \$1,080 on 24 deluxe platters. How much money would the deli make on 35 deluxe platters?

- Ⓐ \$1,575
- Ⓑ \$1,555
- Ⓒ \$1,475
- Ⓓ \$1,455

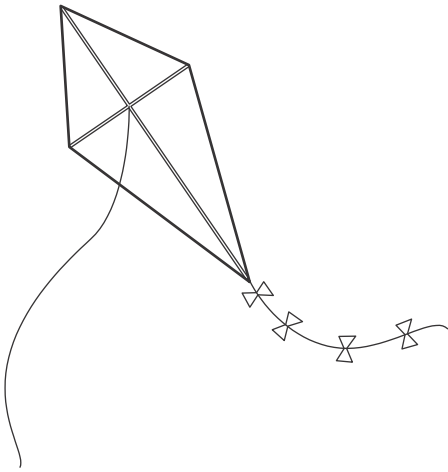
GO ON ►

Benchmark Test 4 *(continued)*

7. Omar pours $\frac{2}{3}$ cup of juice each morning for himself and his two brothers. How many quarts of juice does he use in 30 days?

- (A) $7\frac{1}{2}$ quarts
- (B) 15 quarts
- (C) 20 quarts
- (D) 30 quarts

8. A kite maker uses 125 feet of string for each kite he makes. How many feet of string does he need for 75 kites?

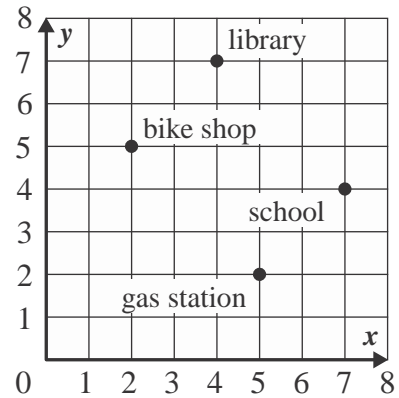


- (F) 8,055 ft
- (G) 8,275 ft
- (H) 9,075 ft
- (I) 9,375 ft

9. A recipe for apricot stuffing calls for $1\frac{1}{2}$ pounds of apricots. If Gracie increases the recipe $2\frac{1}{2}$ times, how many pounds of apricots will she need?

- (A) $7\frac{1}{2}$ pounds
- (B) 4 pounds
- (C) $3\frac{3}{4}$ pounds
- (D) 2 pounds

10. Which place is located at (4, 7)?



- (F) bike shop
- (G) gas station
- (H) library
- (I) school

Benchmark Test 4 (continued)

11. Chloe recorded the lengths of several walking stick insects.

Walking Stick	Length (cm)
A	10.24
B	11.1
C	10.2
D	11.05

Which list shows the lengths in order from least to greatest?

- (A) 10.24, 10.2, 11.1, 11.05
(B) 10.2, 10.24, 11.05, 11.1
(C) 10.24, 10.2, 11.05, 11.1
(D) 11.1, 11.05, 10.24, 10.2

12. Mrs. Hinshaw used $2\frac{3}{4}$ pounds of asparagus and $4\frac{1}{8}$ pounds of shrimp to make stir fry. How many more pounds of shrimp did she use than asparagus?

- (F) $1\frac{3}{8}$ pounds
(G) $1\frac{1}{2}$ pounds
(H) $1\frac{3}{4}$ pounds
(I) $2\frac{3}{8}$ pounds

13. The typical mass of a bullfrog is 0.5 kilogram. What is the mass of 3 bullfrogs in grams?

- (A) 1.5 grams
(B) 15 grams
(C) 150 grams
(D) 1,500 grams

14. Two packages weigh 3.92 pounds and 2.8 pounds. How many times heavier is the first package than the second?

- (F) 0.7 times
(G) 1.12 times
(H) 1.4 times
(I) 1.84 times

15. Davis wants to pour 5 gallons of punch into $\frac{1}{2}$ gallon jugs. How many jugs will he need?

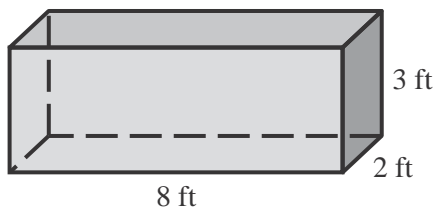
- (A) $2\frac{1}{2}$
(B) $5\frac{1}{2}$
(C) 10
(D) 15

Benchmark Test 4 *(continued)*

16. Angelo used contact paper to cover shelves in a pantry and cupboard. He used $\frac{2}{3}$ of a roll for the cupboard and $\frac{5}{6}$ of a roll for the pantry. How much more contact paper did he use for the pantry?

- Ⓕ $\frac{1}{6}$ roll
- Ⓖ $\frac{1}{3}$ roll
- Ⓗ $\frac{1}{2}$ roll
- Ⓘ $\frac{2}{3}$ roll

17. Audrey bought a cedar chest to store her sweaters. What is the volume of the cedar chest?



- Ⓐ 18 ft^3
- Ⓑ 26 ft^3
- Ⓒ 38 ft^3
- Ⓓ 48 ft^3

18. A pet store sold 8 hamsters for \$10 each and 8 mice for \$3 each. Which numerical expression represents this situation?

- Ⓕ $8 + 10 \times 8 + 3$
- Ⓖ $(8 \times 10) \times (8 \times 3)$
- Ⓗ $8 \times 8(10 + 3)$
- Ⓘ $(8 \times 10) + (8 \times 3)$

19. An airline had 9,453,607 passengers in September. It had fewer passengers in November. Which could be the number of passengers in November?

- Ⓐ 9,481,886
- Ⓑ 9,454,647
- Ⓒ 9,446,879
- Ⓓ 9,504,903

20. Grady bought some fish for \$17.43 and some fish food for \$3.86. About how much more did Grady spend on the fish than on the fish food?

- Ⓕ \$12
- Ⓖ \$13
- Ⓗ \$15
- Ⓘ \$21

Benchmark Test 4 (continued)

21. Michaela wrote her name in block letters. She colored $\frac{3}{4}$ of the letters pink. She drew green dots on $\frac{1}{2}$ of the pink letters. What fraction of the letters is pink with green dots?
- Ⓐ $\frac{1}{4}$
Ⓑ $\frac{3}{8}$
Ⓒ $\frac{6}{8}$
Ⓓ $\frac{5}{4}$
-
22. Ricardo spends $2\frac{2}{3}$ hours practicing soccer on Mondays and Wednesdays. He spends $1\frac{3}{4}$ hours practicing soccer on Tuesdays, Thursdays, and Fridays. How many hours in all does Ricardo spend practicing soccer?
- Ⓕ $8\frac{11}{12}$ hours
Ⓖ $9\frac{3}{4}$ hours
Ⓗ $10\frac{7}{12}$ hours
Ⓘ $11\frac{1}{2}$ hours
-
23. Mr. Sims wants to buy fencing for a square lot that is 30.5 feet on each side. How many feet of fencing does he need?
- Ⓐ 61 feet
Ⓑ 120.5 feet
Ⓒ 122 feet
Ⓓ 930.25 feet
-
24. A gym equally divided 330 towels so that each swimmer in a meet would get 4 towels. How many swimmers are at the meet?
- Ⓕ 80 swimmers
Ⓖ 82 swimmers
Ⓗ 83 swimmers
Ⓘ 84 swimmers
-
25. Two sides of a triangular sign are 24 inches long. The third side is of 18 inches long. What is the perimeter the sign in feet?
- Ⓐ $3\frac{1}{2}$ feet
Ⓑ 4 feet
Ⓒ $4\frac{1}{3}$ feet
Ⓓ $5\frac{1}{6}$ feet

Benchmark Test 4 *(continued)*

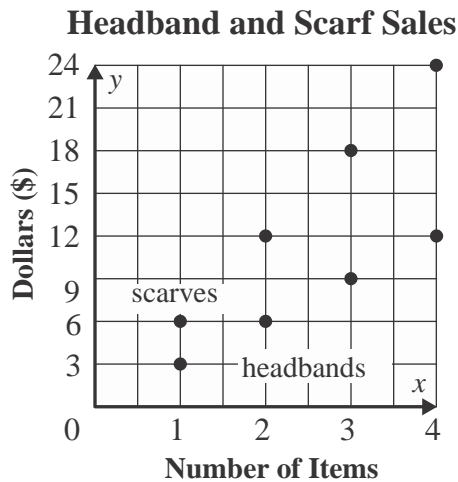
26. Cabins at a resort can sleep up to 48 guests. How many guests can 14 cabins sleep?

- Ⓕ 542 guests
- Ⓖ 572 guests
- Ⓗ 672 guests
- Ⓘ 682 guests

28. The length of a robin's egg is 23.05 millimeters (mm). The length of a wren's egg is 20.85 millimeters. How much longer is the robin's egg?

- Ⓕ 2.2 mm
- Ⓖ 2.75 mm
- Ⓗ 3.2 mm
- Ⓘ 3.8 mm

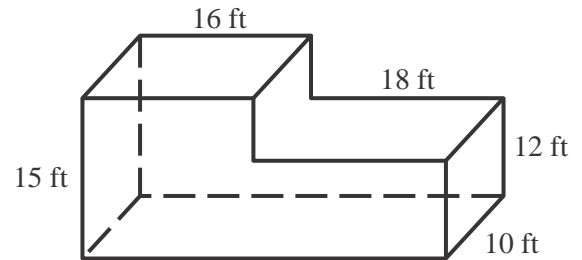
27. Mei sells headbands for \$3 each and scarves for \$6 each. The graph shows the dollar sales for each number of item.



How much more does Mei make selling scarves than headbands?

- Ⓐ twice as much
- Ⓑ three times as much
- Ⓒ from 2 to 3 times as much
- Ⓓ \$12 more for each scarf

29. What is the volume of the storage building?



- Ⓐ 2,400 ft³
- Ⓑ 4,160 ft³
- Ⓒ 4,460 ft³
- Ⓓ 4,560 ft³

_____1 pound. How many ounces does a bag of 8 medium apples weigh?

30. A medium apple weighs about $\frac{1}{4}$ pound.

How many ounces does a bag of 8 medium apples weigh?

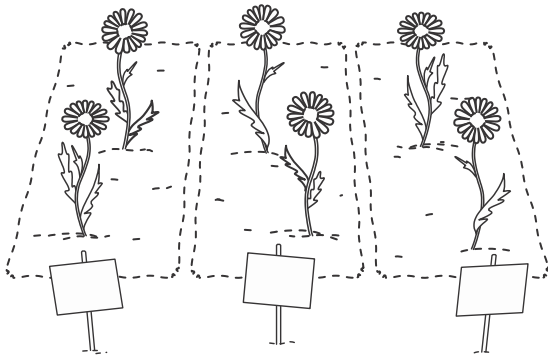
- Ⓕ 64 ounces
- Ⓖ 32 ounces
- Ⓗ 16 ounces
- Ⓘ 2 ounces

Benchmark Test 4 *(continued)*

31. Casey feeds her pot-bellied pig $1\frac{1}{3}$ cups of feed each day. How many cups of feed does her pig eat in 14 days?

- (A) $4\frac{2}{3}$ cups
- (B) $14\frac{2}{3}$ cups
- (C) $18\frac{2}{3}$ cups
- (D) $23\frac{1}{3}$ cups

32. Adam divided his garden into 3 equal sections. The total area of the garden is 49.2 square feet. What is the area of each section?



- (F) 8.2 square feet
- (G) 13.9 square feet
- (H) 14.8 square feet
- (I) 16.4 square feet

33. A hatchling Burmese python is 0.6 meter long. It can grow to be as long as 7 meters. If the hatchling grows to 7 meters, how many centimeters does it grow?

- (A) 700 centimeters
- (B) 640 centimeters
- (C) 70 centimeters
- (D) 64 centimeters

34. What is the value of the expression?

$$10 + 5 \times \{12 \div [(9 - 7) \times 3]\}$$

- (F) 20
- (G) 30
- (H) 100
- (I) 270

35. Six pancakes have 72 grams (g) of carbohydrates. How many grams of carbohydrates are in one pancake, on average?

- (A) 12 g
- (B) 66 g
- (C) 78 g
- (D) 432 g

Benchmark Test 4 *(continued)*

36. In a class vote on favorite vegetables, $\frac{5}{12}$ of the students voted for corn and $\frac{5}{12}$ voted for carrots. What fraction of the class did **not** vote for corn or carrots?

- (F) $\frac{1}{6}$
- (G) $\frac{1}{2}$
- (H) $\frac{2}{3}$
- (I) $\frac{5}{6}$

37. Bobbie is getting ready for a marathon. She ran a total of 600 miles in the past 50 days. How many miles did she run each day on average?



- (A) 10 miles
- (B) 12 miles
- (C) 14 miles
- (D) 120 miles

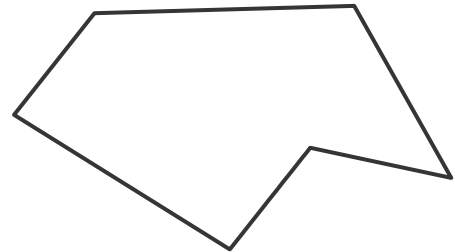
38. A grey whale's mass is about 85 kilograms. What is its mass in grams?

- (F) 8,500 g
- (G) 85,000 g
- (H) 850 g
- (I) 58,000 g

39. In Kip's class, $\frac{3}{20}$ of the students are wearing sandals. What is this fraction written as a decimal?

- (A) 0.32
- (B) 0.3
- (C) 0.15
- (D) 0.105

40. What is the name of the polygon?



- (F) quadrilateral
- (G) pentagon
- (H) octagon
- (I) hexagon

Benchmark Test 4 (continued)

41. Jordan saved the same amount of money each week for 7 weeks to pay for summer camp. He saved \$441 in all. The camp costs \$245 with another \$5 per day for activity fees. How much did Jordan save each week?

- (A) \$28
- (B) \$49
- (C) \$63
- (D) \$98

42. Ethan bought 2 action figures for \$25 each at a science fiction fair. He won an auction for a plastic sword, and he got a deal on 5 comic books for \$9 each. He spent \$102 altogether. How much did Ethan pay for the plastic sword?

- (F) \$7
- (G) \$16
- (H) \$27
- (I) \$32

43. Jacqui has $3\frac{1}{2}$ yards of fabric to make a costume. She used $\frac{1}{4}$ make a hat. How much of the fabric did she use?

- (A) $\frac{3}{4}$ yard
- (B) $\frac{7}{8}$ yard
- (C) 1 yard
- (D) $1\frac{1}{8}$ yards

44. A walk-a-thon raised \$998.50. If 10 charities split the money equally, how much will each charity receive?

- (F) \$9.99
- (G) \$98.50
- (H) \$99.85
- (I) \$9,985

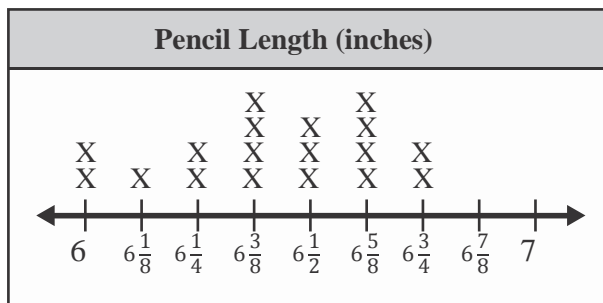
45. Carlos paddled a canoe at an average rate of 6.32 miles per hour. How far did he travel in 2.5 hours?

- (A) 15.8 miles
- (B) 15.7 miles
- (C) 15.69 miles
- (D) 158 miles

Benchmark Test 4 *(continued)*

46. Gabriela used $\frac{1}{8}$ pound jalapeno peppers, $\frac{2}{3}$ pound chili peppers, and $\frac{7}{16}$ pound Anaheim peppers to make enchilada seasoning. About how many pounds of peppers did Gabriela use?
- F $0 + \frac{1}{2} + \frac{1}{2} = 1$ pound
 - G $\frac{1}{2} + 1 + \frac{1}{2} = 2$ pounds
 - H $\frac{1}{2} + 1 + 1 = 2\frac{1}{2}$ pounds
 - I $1 + 1 + 1 = 3$ pounds

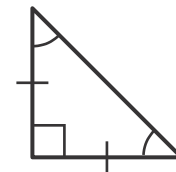
47. The line plot shows the length of some pencils in Ashton's class.



- How many times longer is the longest pencil than the shortest pencil?
- A $1\frac{1}{12}$ times as long
 - B $1\frac{1}{8}$ times as long
 - C $1\frac{1}{6}$ times as long
 - D $1\frac{1}{4}$ times as long

48. An art store has 10^3 posters. If the store sells each poster for \$8, how much money will the store make on the posters?
- F \$80
 - G \$240
 - H \$800
 - I \$8,000

49. Which **best** describes the triangle?



- A obtuse scalene
- B acute isosceles
- C right scalene
- D right isosceles

50. Jani has a 750-milliliter water bottle she takes when hiking. If she fills it 3 times and drinks all of the water, how many liters of water does she drink?
- F 2.15 liters
 - G 2.25 liters
 - H 22.5 liters
 - I 225 liters



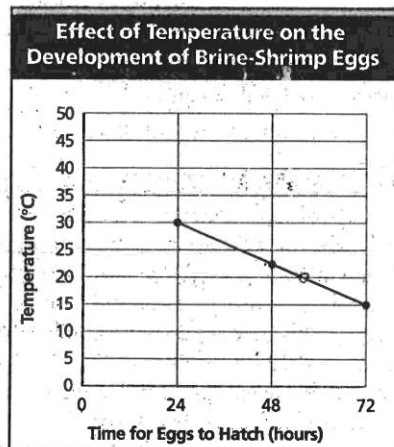
6th Science Graph

- **Independent Variable:** The factor that is changed in an experiment. (depth of seed)
- **Dependent Variable:** The factor that responds to the change. The change is measured and recorded in metric units. (sprouting time)

Scientific Inquiry and Brine-Shrimp Eggs

Scientific inquiry involves different processes, such as posing questions, developing hypotheses, performing experiments, and interpreting data. A scientist was studying brine shrimp, which are tiny animals that live in salt water. The scientist wondered whether the temperature of the water affects the time it takes for brine-shrimp eggs to hatch. The scientist performed an experiment to find the effect of temperature on brine-shrimp eggs. In the experiment, one group of eggs was in water that had a temperature of 30°C. A second group of eggs was in water that had a temperature of 22°C, and a third group was in water at 15°C. The graph below shows the data that the scientist collected.

Study the graph, and then answer the following questions on a separate sheet of paper.



1. What question did the scientist pose?
2. What was the manipulated variable in the experiment that the scientist performed?
3. What was the responding variable in the experiment?
4. How long did the brine-shrimp eggs take to hatch at 30°C? How long did the eggs take to hatch at 15°C?
5. What do the data show about the effect of temperature on the time brine-shrimp eggs take to hatch?
6. Suppose that, before the experiment, the scientist proposed the following hypothesis: Temperature has no effect on the time brine-shrimp eggs take to hatch. Do the data support this hypothesis? Explain why or why not.
7. Predict how long brine-shrimp eggs would take to hatch in water that had a temperature of 20°C.