

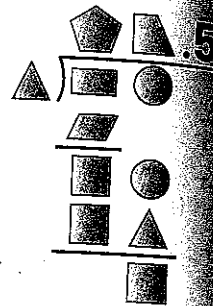
# WSCA Summer Assignment

## Pre-Algebra

In Exercises 1-3, use dot paper to sketch a polygon of the given shape. (1.3)

1. Quadrilateral                      2. Pentagon                      3. Triangle

4. **GUESS, CHECK, AND REVISE** The diagram at the right represents a long-division problem. Each polygon represents a different digit. What is the long-division problem? (1.5, 2.7)



5. **USING LOGICAL REASONING** May, Ray, Kay, and Fay are all different ages. (1.7)

- Kay is older than May.
- Fay is younger than Ray.
- May is older than Ray.

Order the people from oldest to youngest.

In Exercises 6-8, evaluate the expression. (2.1, 2.2)

6.  $9 + 3^3 \div 9$                       7.  $115 - 3(7 + 4) \times (11 - 8)$                       8.  $8 \times 10 - 2^5 \div 16$

In Exercises 9-12, write the prime factorization of the number. (2.4)

9. 72                      10. 75                      11. 112                      12. 189

In Exercises 13-15, find the greatest common factor and the least common multiple of the numbers. (2.5, 3.1)

13. 6, 14                      14. 24, 56                      15. 25, 30

In Exercises 16-19, match the fraction with its equivalent fraction or mixed number. (2.6, 3.2)

- A.  $2\frac{1}{3}$                       B.  $\frac{3}{5}$                       C.  $4\frac{2}{3}$                       D.  $\frac{5}{3}$
16.  $\frac{14}{3}$                       17.  $\frac{15}{25}$                       18.  $\frac{30}{18}$                       19.  $\frac{42}{18}$

In Exercises 20 and 21, order the numbers from least to greatest. (2.8)

20.  $1.75, \frac{9}{5}, \frac{8}{3}, \frac{7}{2}, \frac{5}{9}, 2.65$                       21.  $\frac{9}{8}, 1.25, 1.05, \frac{3}{2}, \frac{6}{5}, 1.1$

In Exercises 22-29, add, subtract, multiply, or divide. (3.3-3.5, 3.7)

22.  $\frac{2}{3} + \frac{1}{6}$                       23.  $\frac{3}{4} - \frac{3}{5}$                       24.  $6\frac{1}{4} - 4\frac{3}{8}$                       25.  $2\frac{5}{8} + 7\frac{5}{12}$
26.  $\frac{1}{4}$  of  $\frac{6}{7}$                       27.  $2\frac{1}{2} \times 3\frac{2}{5}$                       28.  $\frac{14}{9} \div \frac{7}{8}$                       29.  $4\frac{1}{6} \div 4$

In Exercises 30 and 31, use the description of the pattern to make a table of values for  $x = 1, 2, 3, 4, 5,$  and  $6$ . Then draw a scatter plot of the data. (4.1, 4.2)

30. The value of the expression begins at  $-4$ . Each time  $x$  increases by 1, the value of the expression increases by 3.
31. The value of the expression begins at 4. Each time  $x$  increases by 1, the value of the expression decreases by 2.

**SCUBA DIVING** In Exercises 32 and 33, you are scuba diving. The table below shows the dives you took at different times of the day. (4.3-4.5)

Time	10:00 A.M.	1:00 P.M.	4:00 P.M.
Depth	-55 ft	-25 ft	-80 ft



32. Find the sum of all three dives.
33. Find the difference between the 4:00 P.M. dive and the 10:00 A.M. dive.

In Exercises 34 and 35, find the mean, median, and mode of the data. (5.1)

34. Number of minutes of piano practice each day for 7 days: 10, 35, 25, 45, 15, 20, 25
35. Scores of 10 bowling games: 131, 167, 155, 111, 132, 149, 131, 102, 148, 134
36. Make a box-and-whisker plot of the data in Exercise 35. (5.3)

**HOCKEY** The table shows the number of games played and the number of points scored by the Pittsburgh Penguins for several hockey seasons. (5.5, 6.2)

Season	1991-92	1992-93	1993-94	1994-95	1995-96
Games	80	84	84	48	82
Points	87	119	101	61	102

(Source: National Hockey League)

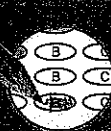
37. Make a line graph of the number of points scored. Describe any patterns that you see.
38. Find the unit rate in points per game for each season.

In Exercises 39-41, use cross products to solve the proportion. Then check the solution. (6.4)

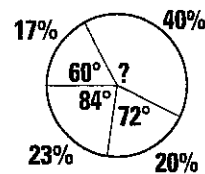
39.  $\frac{x}{45} = \frac{3}{27}$

40.  $\frac{8}{5} = \frac{m}{45}$

41.  $\frac{33}{36} = \frac{11}{n}$



- Which number does not belong in this list?  $3.6\%$ ,  $0.36$ ,  $\frac{9}{25}$ ,  $\frac{27}{75}$   
 (A)  $3.6\%$  (B)  $0.36$   
 (C)  $\frac{9}{25}$  (D)  $\frac{27}{75}$
- A store charges 138% of the cost for a pair of sneakers. The store's cost was \$28. How much does the store charge the customer?  
 (A) \$14.44 (B) \$17.36  
 (C) \$38.64 (D) \$66.64
- A store marks jeans at 60% of the original price of \$32. For final clearance, the store takes \$5 off the sale price. What is the final clearance price of the jeans?  
 (A) \$48.33 (B) \$19.20  
 (C) \$14.20 (D) \$9.60
- In a survey, 28 seventh graders said that their favorite lunch was spaghetti. This was 16% of the class. How many students are in the class?  
 (A) 4 (B) 32  
 (C) 175 (D) 448
- You deposit \$750 in a savings account for six months. The annual interest rate is 5%. How much interest will you earn on the account?  
 (A) \$375.00 (B) \$187.50  
 (C) \$37.50 (D) \$18.75
- What is the percent change from 144 to 72?  
 (A) 72% decrease (B) 50% increase  
 (C) 72% increase (D) 50% decrease
- The decimal number 0.00068 is not the same as  
 (A) 0.068%. (B)  $\frac{68}{100,000}$   
 (C)  $\frac{51}{75,000}$  (D)  $\frac{16}{100}$
- A survey states that 20% of high school students have gone out of state on vacation. Out of 200 students, how many went out of state on vacation?  
 (A) 5 (B) 10  
 (C) 20 (D) 40
- This year, 592 students said they recycle. That is 320% of the number who recycled eight years ago. How many recycled eight years ago?  
 (A) 54 students (B) 185 students  
 (C) 189 students (D) 1894 students
- Find the missing measure.  
 (A)  $135^\circ$  (B)  $164^\circ$   
 (C)  $144^\circ$  (D)  $154^\circ$



- Your brother buys a car for \$800, fixes it up, and sells it for \$1000. What was the percent increase in the car's price?  
 (A) 20% (B) 25%  
 (C) 120% (D) 125%
- Which equation could be used to solve this question? 14 is 25% of what number?  
 (A)  $\frac{25}{x} = \frac{14}{100}$  (B)  $\frac{x}{14} = \frac{25}{100}$   
 (C)  $\frac{14}{x} = \frac{25}{100}$  (D)  $\frac{x}{25} = \frac{100}{14}$