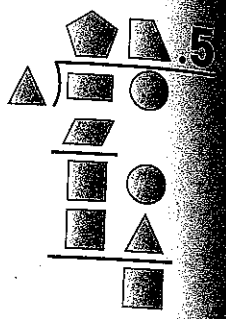
WSCA Summer Assignment
Pre-Algebra

Cumulative Review CHAPTERS 1-6

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. $1.\dot{7}5, \frac{9}{5}, \frac{8}{3}, \frac{7}{2}, \frac{5}{9}, 2.65$
21. $\frac{9}{8}, 1.25, 1.05, \frac{3}{2}, \frac{6}{5}, 1.1\overline{}$

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

Standardized Test Practice

1. 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) $\frac{27}{75}$

2. 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

3. 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

4. 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

5. 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

6. What is the percent change from 144 to 72?

(A) 72% decrease (B) 50% increase

(C) 72% increase (D) 50% decrease

7. The decimal number 0.00068 is not the same as

(A) 0.068%. (B) $\frac{68}{100{,}000}$.

(C) $\frac{51}{75{,}000}$. (D) $\frac{16}{100}$.

8. 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

9. 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

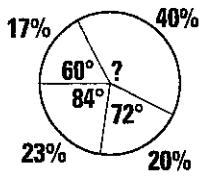
10. Find the missing measure.

(A) 135°

(B) 164°

(C) 144°

(D) 154°



11. 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%

12. 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) $\frac{x}{25} = \frac{100}{14}$