

SPIRAL REVIEWS
Day 1

1. If $10 \bullet 4 \bullet Z = 10$, then what is Z?

- | | |
|------------------|--|
| A. $\frac{1}{4}$ | $\frac{40z}{40} = \frac{10}{40}$ |
| B. 4 | $\frac{40z}{10} = \frac{10}{10}$ |
| C. 25 | $\frac{4z}{4} = \frac{100}{4}$ |
| D. 40 | $4z = 10 \quad 4z \times 4 = 10 \times 4 \quad z = 40$ |

Teacher's Guide
includes error
analysis.



2. Simplify. $5 - [3 + (8 - 12)]$

- | | |
|-------------|------------------------------|
| A. 2 | $5 - (3 + 4)$ |
| B. 4 | $5 - 1$ |
| C. 6 | $1 - (-1)$ |
| D. 12 | $5 + (3 + 4)$ |

3. If $x = -4$, then what is $(x + 2) (x - 2)$?

- | | |
|--------------|------------------------------|
| A. -20 | $x^2 - 4 = -16 - 4$ |
| B. -12 | $(-2)(6)$ |
| C. 4 | $(-2)(-2)$ |
| D. 12 | $(-2)(-6)$ |

4. If $0.25 + 0.50 + 2 + 0.25 + x = 6$, then what is "x"?

- | | | |
|-------------|-------------------------------|---------------------------------------|
| A. 3 | $3 + x = 6$ | $3 - 3 + x = 6 - 3$ |
| B. 3.5 | $2.5 + x = 6$ | $2.5 - 2.5 + x = 6 - 2.5$ |
| C. 8.5 | $2.5 + x = 6$ | $2.5 + 2.5 + x = 6 + 2.5$ |
| D. 9 | $3 + x = 6$ | $3 + 3 + x = 6 + 3$ |

5. Three persons line up at a ticket window. In how many different orders can they arrange themselves in line?

- | | |
|-------------|---|
| A. 2 | $\frac{3 \cdot 2 \cdot 1}{3} = 2$ |
| B. 6 | $3 \cdot 2 \cdot 1 = 6$ |
| C. 9 | $3 + 3 + 3 = 9$ |
| D. 27 | $3 \cdot 3 \cdot 3 = 27$ |

SPIRAL REVIEWS

Day 2

Show all steps. Use the grids below to record each answer.

1. Simplify. $\frac{6(10 - 4) - 6(8 - 7)}{10}$
2. What is the value of $\frac{x - 1}{x + y} + \frac{x - y}{y + 1}$ when x is 5 and y is 3?
3. A sack contains 100 pounds of grass seed which is to be separated into packages containing 8 ounces each. How many such packages can be made?
4. The scale of a map is 4 inches = 24 miles. What is the area, in square miles, of a plot represented on this map by a square whose side is 2 inches?
5. Between 1:00 p.m. and 3:00 p.m., a parts store waited on customers numbered 100 through 200. How many customers were waited on during the two hour period?

Day #2 Answer Key				
1	2	3	4	5
3.00	1.00	200.	144.	101.

SPIRAL REVIEWS

Day 3

1. A long jumper has jumps of 20 feet, 22 feet and 24 feet. What is the average (arithmetic mean) of these jumps?

- A. 20 first
B. 22 $\frac{20 + 22 + 24}{3} = 22$
 C. 24 last
 D. 33 $\frac{20 + 22 + 24}{2} = 33$

2. A stick is lying on a number line. One of its ends is at coordinate -6 and the other is at coordinate 5 . What is the length of the stick?

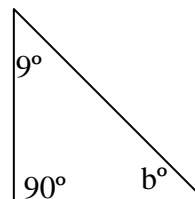
- A. -1 $-6 + 5$
 B. 1 $|-6 + 5|$
 C. 10 count spaces
D. 11 $|-6 - 5|$

3. If $3x^2 - 6 = y$ and $x = 2$, then what is y^2 ?

- | | | | |
|------------------|----------------------|--------------------------------|--|
| A. 0 | $(3x^2 - 6)^2 = y^2$ | $9x^2 - 36x + 36 = y^1$ | $36 - 72 + 36 = 0$ |
| B. $\frac{8}{3}$ | $3x^2 - 6 = 2$ | $3x^2 - 6 + 6 = 2 + 6$ | $3x^2 = \frac{8}{3}$ $x^2 = \frac{8}{3}$ |
| C. 36 | $3 \cdot 4 - 6$ | $12 - 6 = 6$ | $6^2 = 36$ |
| D. 900 | $(3 \cdot 2)^2 - 6$ | $36 - 6 = 30$ | $30^2 = 900$ |

4. In the triangle at the right, then what is $9 + b$ equal to?

- A. 81 $90 - 9 = 81$
B. 90 **$180 - 90 = 90$**
 C. 261 $360 - 90 - 9 = 261$
 D. 270 $360 - 90 = 270$



5. If the rectangle at the right has perimeter 20 and length 8, what is the area?

- A. 2 $2W + 2L = 20$ $\frac{2W}{2} = \frac{4}{2}$ $w=2$
B. 16 **$W = 2$ $L = 8$ $2 \times 8 = 16$**
 C. 96 $20 - 8 = 12 = w$ $12 \times 8 = 96$
 D. 160 $20 \times 8 = 160$



SPIRAL REVIEWS

Day 4

Show all steps.

1.
 - a. Michael, Mary, Joe and Greg are lining up at the classroom door. In how many different orders can they line up? Make a table or organized list to show the possible outcomes.
 - b. How many possible outcomes did you find?
 - c. What is the probability that both Michael and Mary will be either 1st or 2nd? Use what you know about probability to explain how you determined your answer. Use math words, numbers and/or symbols in your explanation.

Day #4 Answer Key

- a. Organization of charts or lists will vary.

1	2	3	4
Michael	Mary	Joe	Greg
Michael	Mary	Greg	Joe
Michael	Greg	Joe	Mary
Michael	Greg	Mary	Joe
Michael	Joe	Mary	Greg
Michael	Joe	Greg	Mary
Mary	Michael	Joe	Greg
Mary	Michael	Greg	Joe
Mary	Joe	Michael	Greg
Mary	Joe	Greg	Michael
Mary	Greg	Michael	Joe
Mary	Greg	Joe	Michael
Greg	Mary	Michael	Joe
Greg	Mary	Joe	Michael
Greg	Michael	Joe	Mary
Greg	Michael	Mary	Joe
Greg	Joe	Michael	Mary
Greg	Joe	Mary	Michael
Joe	Mary	Michael	Greg
Joe	Mary	Greg	Michael
Joe	Michael	Greg	Mary
Joe	Michael	Mary	Greg
Joe	Greg	Mary	Michael
Joe	Greg	Michael	Mary

- b. There are 24 possible outcomes.
- c. Both Michael and Mary being 1st and 2nd happened only 4 times. Therefore the probability is $\frac{4}{24}$ or $\frac{1}{6}$.

SPIRAL REVIEWS

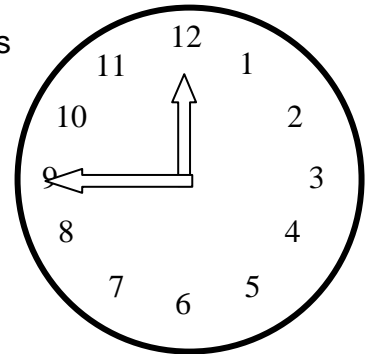
Day 5

1. Simplify. $90 + 6 + \frac{1}{2} - \frac{1}{3}$

- A. $96\frac{4}{5}$ $96 - \frac{1}{5}$
 B. $96\frac{1}{5}$ $96 + \frac{1}{5}$
 C. 96.5 $90 + 6 + .5$
D. 96.17 **$96.5 - .33$**

2. In the figure at the right, what is the degree measure of the smaller angle formed by the hour and minute hands on the clock?

- A. 30°
 B. 60°
 C. 80°
D. 90°



3. In his clothes drawer Lewis has 15 garments, all of which are socks or underwear. If 40 percent of the garments are socks, how many garments are underwear?

- A. Nine** $.4 \times 15 = \text{socks}$ **socks = 6** **$15 - 6 = 9$**
 B. Six $.4 \times 15 = 6$
 C. Five
 D. Three

4. Three cats weigh 2, 4, and 6 pounds, respectively. The weight of the heaviest cat is how much more than the average (arithmetic mean) weight of the three cats?

- A. 1 lb.
B. 2 lbs. **$6 - 2 = 2$**
 C. 2.5 lbs. heaviest
 D. 4 lbs. average

5. A student received grades of 66, 75, 86, 91, 94 and 94 percent. What is the average (arithmetic mean) of these scores?

- A. 80
B. 84.3 $506 \div 6 = 84.\bar{3}$
 C. 88.5 median
 D. 94 mode