Name _____

Topic 3
Assessment
Form B

1. Evaluate the expression below.

$(5.2 + 6.3) - 12 \div 2.5$

2. Water bottles are sold in cases of 24. Select the expressions that can represent the total number of water bottles in c cases of water bottles.

- ☐ $24 \times c$
- ☐ $24 \div c$
- ☐ $24 + c$
- ☐ $24 - c$
- ☐ $24c$

3. Select each expression that has a value of 24 when $x = 18$.

- ☐ $5{,}760 \div x$
- ☐ $\frac{x}{6} + 21$
- ☐ $\frac{162}{x} + 17$
- ☐ $2x^2 \div 27$
- ☐ $(4{,}050 \div x) - 201$

4. The same digits are used for the expressions 5^2 and 2^5. Explain how to compare the value of each expression.

5. For questions 5a–5d, choose Yes or No to tell whether the expressions are equivalent.

5a. $6a + 12$ and $3(3a + 4)$	○ Yes	○ No
5b. $3(5b - 2)$ and $8b - 5$	○ Yes	○ No
5c. $5(5c + 6)$ and $25 + 30c$	○ Yes	○ No
5d. $20d - 16$ and $4(5d - 4)$	○ Yes	○ No

6. For questions 6a–6d, choose Yes or No to tell whether 5 is the GCF of the pair of numbers.

6a. 15, 25	○ Yes	○ No
6b. 40, 70	○ Yes	○ No
6c. 45, 60	○ Yes	○ No
6d. 65, 75	○ Yes	○ No

7. Ms. Perkins wants to rent a car for a day. It will cost the daily fee of $75 plus $0.55 per mile driven.

Part A

Let m = the number of miles Ms. Perkins drives for the day. Write an expression that shows the amount she will pay for the car.

Part B

Evaluate the expression you wrote to find the amount Ms. Perkins will pay if she drives 300 miles.

8. Zoe wrote the prime factorization of 40. Which expressions could she have written? Select all that apply.

- ☐ 4×10
- ☐ $2 \times 2 \times 10$
- ☐ $2 \times 2 \times 2 \times 5$
- ☐ 2^4
- ☐ $2^3 \times 5$

9. Evaluate the expression $8.952 + p$ for $p = 0.276$.

10. At her health club, Lauren uses a treadmill every 2 days and the weight machines every 8 days. She used a treadmill on March 2 and will use the weight machines on March 8. Lauren says that the first time she will use both a treadmill and the weight machines in March is March 16 because the LCM of 2 and 8 is 16.

Does Lauren's reasoning make sense? Use an example or a counterexample to explain your analysis.

11. Select the expressions that are equivalent to $18m - 12$.

- ☐ $6m - 4 + 6m - 4 + 6m - 4$
- ☐ $12m + 6 - 6m - 6$
- ☐ $6(3m - 2)$
- ☐ $3(6m - 4)$
- ☐ $24n - 4^2 + 8 - 6m$

