

## Number and Quantity – Answer Key

Page 2:

2) A

3) A

5) C

7) C

8) B

9) D

Page 3:

1) C

2) B

5) C

9) B

13) B

Page 4:

3) B

10) A

11) B

12) B

13) D

Page 5:

13) D

14) C

16) 55

18) 10.3

18) 23

19) 36

Page 6:

17) ORQ – See attached

Page 7:

17) ORQ – See attached

Page 8:

20) ORQ – See attached

Page 9:

22) C

25) C

31) C

Page 10:

23) B

38) A

a.  $\sqrt{55}$  is between 7 and 8 because  $7^2 = 49$  and  $8^2 = 64$  and 55 is in between those two.

b. 7.4 is the closest value of  $\sqrt{55}$ . Because  $7.4^2 = 54.76$  and  $7.5^2 = 56.25$  and that is too big so it should be 7.4.

c. m could be any number between  $11^2$  and  $12^2$  (121 and 144)  $121 < m < 144$ , so it could be 135 for example.

d. n could equal any number between  $11^3$  and  $12^3$  (1,331 and 1,728) so it could be 1,450 for example.

$$\begin{aligned}
 \text{a. } & 4 \cdot 6 \div 3 + 5(2-6)^2 \\
 & 24 \div 3 + 5(-4)^2 \\
 & 8 + 5(16) \\
 & 8 + 80 \\
 & \boxed{88}
 \end{aligned}$$

Use PEMDAS to get score of 88 so yes, Leo scored over an 80 so he maintained a B in the class

$$\begin{aligned}
 \text{b. } & 9 + 8[4 + 2(3-5)^2] - 3 \cdot 4 \\
 & 9 + 8[4 + 2(2)^2] - 3 \cdot 4 \\
 & 9 + 8[4 + 2(4)] - 3 \cdot 4 \\
 & 9 + 8(12) - 3 \cdot 4 \\
 & 9 + 96 - 12 \\
 & 105 - 12 = \boxed{93}
 \end{aligned}$$

Use PEMDAS to get a 93 for Gerard's score which is 3 points away from his estimate of 90

$$\begin{aligned}
 \text{c. } & \frac{26 - 10 \cdot 10 - 8}{8 \div 4} \quad \frac{-74 - 8}{2} \\
 & \frac{-82}{2} \quad \boxed{-41}
 \end{aligned}$$

Tia's claim is correct because she cannot get a score that is negative (-41)

$$\boxed{\frac{(26 - 10) \cdot 10 - 8}{8 \div 4}}$$

$$160 - 8 = \frac{152}{2} = 76$$

a)  $31,937 \rightarrow 32,000$

$38,031 \rightarrow 38,000$

$$38,000 - 32,000 = 6,000$$

about 6,000 tickets

b)  $28,359 \rightarrow 28,000$

$$7 \overline{) 28,000} \begin{array}{r} 4,000 \\ \hline \end{array}$$

$71.6\% \rightarrow 70\%$

$$\begin{array}{ccc} 4000 \times 10 = 40,000 & & \\ \uparrow & & \uparrow \\ 10\% \times 10 = 100\% & & \end{array}$$

about 40,000 tickets

c)  $11.25 \rightarrow 11 \left\{ \begin{array}{l} 24.75 \rightarrow 25 \\ 53.75 \rightarrow 54 \end{array} \right. \rightarrow 54 + 11 + 25 = 90$

$$3 \overline{) 90} \begin{array}{r} 30 \\ \hline \end{array}$$

about \$30 each

d)

fri =  $32,000 \times 30 = 960,000$

sat =  $28,000 \times 30 = 840,000$

sun =  $38,000 \times 30 = 1,140,000$

Friday = \$960,000 Saturday = \$840,000

Sunday = \$1,140,000