Name _____   **Date** _____

7th Grade Semester 1 Assessment

NS.3   1.   Evaluate the expression. Show your work.   1._____

$$(12.4 + 3.6) \div 4^2$$

NS.3   2. You purchase 4 movie tickets that cost a total of $27.80. How much did   2._____
         one movie ticket cost? Show your work.

NS.3   3. $222 - 3(5^2 - 4^2) + 12$ 3._____

NS.3   4. This morning at 8:00, the temperature was –7°F. Yesterday morning, the   4._____
         temperature was 6°F colder. What was yesterday's temperature?
         Show your work.

G.1   5. The scale of a map is 1 inch : 35 miles. Find the actual distance in miles   5._____
      for a length of 5 inches on the map. Make a proportion and show your work.

G.1   6. A blueprint shows a layout of a building. Every 3 inches in the blueprint   6._____
      represents 5 feet of the actual building. One of the walls on the blueprint is 21
      inches long. What is the length of the actual wall? Make a proportion and
      show your work.

G.1   7. On a scale drawing with a scale of 1cm:6m, the height of a tree is 8 cm.   7._____
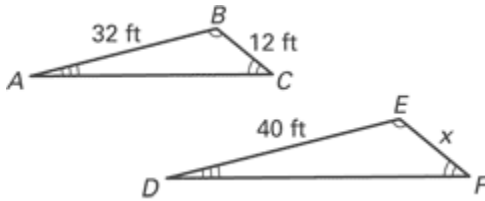   How tall is the actual tree? Show your work.

RP.2 8. Find the unit price for each offer to determine which is the better buy: 8. _____
      6 paperback books for $19.00 or 8 paperback books for $26.00.
      Show your work.

                                                                                          _____

RP.2   9.   Use cross products to decide whether the ratios form a proportion.   9._____
            Show your work.

$$\frac{6}{4} \stackrel{?}{=} \frac{15}{10}$$

RP.2   10. Find the unknown length x given that the polygons are similar.   10. _____
            Make a Proportions and show your work.

EE.3 11. Valentina's bill at a restaurant was $48 for dinner. She wants to leave   11._____
            about a 10% tip for the waitress. Estimate the tip amount to the nearest dollar.
            Show your work.

EE.3 12. Three friends have dinner at a restaurant. The total bill for the dinner is $41. The   12._____
            friends want to leave a 15% tip and they want to divide the tip evenly among
            themselves. Which is the best estimate of each friend's share of the tip?

                    A. $2   C. $4

                    B. $3   D. $6

EE.3   13. Iris wants to buy two necklaces, one for her sister, and one for herself. The   13._____
necklace for her sister costs $42.00, and the necklace for herself costs $28.00. The
sales tax on the purchases is 8%. Find the total cost of Iris's purchases, including
sales tax. If necessary, round your answer to the nearest cent.

RP.3   **14.** A retailer buys a shirt in bulk at a wholesale price of $18. The shirt is marked   14._____
up 40% to sell in the store. What is the retail price of the shirt in the store?
Show your work.

RP.3   **15.** The sales tax in Soldotna is 6%. How much will an $80.00 jacket cost,   15._____
including sales tax? Show your work.

RP.3 **16.** Jack has $5,400 in his savings account. Use the formula for Simple Interest   16._____
        (I = P • r • t) to find how much interest he earns in one year if the bank pays
         5% interest? Show your work

RP.3 **17.** What is the percent of change or percent decrease if a $30 shirt is decreased   17._____
        to a sale price of $25? Round your answer to the nearest tenth. Show your work.

ANSWER KEY

7th Grade Semester 1

1. $(12.4 + 3.6) ÷ 4^2$
    $16 ÷ 4^2$
    $16 ÷ 16$
    1
    Total Points: 4 (minus one for wrong answer in parenthesis, minus one for wrong answer to exponents, minus one for dividing wrong)

2. $\$27.80 ÷ 4$
    $\$6.95$
    Total Points: 4 (minus one if not labeled with $, minus one if decimal point in wrong place)

3. $222 – 3(5^2 - 4^2) + 12$
    $222 – 3(25 - 16) + 12$
    $222 – 3(9) + 12$
    $222 – 27 + 12$
    207
    Total Points: 4 (Minus one for wrong answer inside parenthesis, minus two for subtraction before multiplication, minus one for no work shown)

4. $-7 – 6$
    $-7 + (-6)$
    $-13°$ F
    Total Points: 4 (minus one if not labeled with °F, minus one if positive answer)

5. $\underline{1\ inch}\ =\ \underline{5\ inches}$
    35 miles   X miles
    $35 × 5 = 175$
    $175 ÷ 1 = 175$
    175 miles
    Total Points: 4 (minus one for not labeling with miles, minus 1 for no or incorrect proportion, minus 2 for incorrect answer)

6. $\frac{3\ in}{5 ft} = \frac{21\ in}{x\ ft}$
    $3x = 5 * 21$

    $3x = 105$

    $X = 35$ Ft

    Total Points: 4 (minus one for not labeling with feet, minus 1 for missing/incorrect proportion, minus 2 for incorrect answer)

7th Grade Mathematics Semester 1 Assessment

7. $\underline{1\ cm} = \underline{8cm}$
    6 m   x m
    $6 \times 8 = 48$
    $48 \div 1 = 48$
    48 m
    Total Points: 4 (minus one for not labeling with m or meters. Minus one for not showing work)

8. $\$19.00 \div 6 = \$3.17$
    6 books cost $3.17 per book,
    $\$26.00 \div 8 = \$3.25$
    8 books cost $3.25 per book,
    6 books is the better buy
    Total Points: 4 (one point for unit rate of 6 books, one point for unit rate of 8 books, and two points for the better buy)

9. $\underline{6} = \underline{15}$
    4   10
    $4 \times 15 = 6 \times 10$
    $60 = 60$ yes
    Total Points: 4 (minus 1 for not showing work.)

10. $\underline{32ft} = \underline{12ft}$
    40 ft   x ft
    $32 \times x = 40 \times 12$
    $32x = 480$
    $x = 15$ feet
    Total Points: 4 (minus 1 for missing or incorrect proportion. minus one for not labeling with feet)

11. $\$48 \times .10 = \$4.80$
    $4.80 when estimated to nearest dollar is $5.00
    $5.00
    Total Points: 4 (minus one for not estimating to the nearest dollar; minus one if not label with $, minus 2 if the answer is not 4.8 or 5.)

12. $\$41 * 0.15$
    $6.15 Tip
    6.15/3 friends
    $2.05 per friend
      $2
    Total Points: 4 (minus 2 pts if they only calculate tip, minus one point if they calculate tip incorrectly but complete the problem correctly)

13. **$42+$28**
       $70   1 pt to here
      70 (.08)
       $5.60   2 pt to here
     $70 + 5.60
       $75.60   3 pts if label is missing, 4 pt if label is included
                Total Points: 4

14. 40% of $18
    .4(18)
    $7.20
    $18 + $7.20
    $25.20
    Total Points: 4 (minus one if not label with $, minus two for answer of $7.20)

15. 6% of $80
    .06(80)
    4.80
    $80 +$4.80
    $84.80
    Total Points: 4 (minus one if not label with $, minus two for answer of $4.80)

16. I = Prt
    I = $5,400 × .05 × 1
    I = $270
    Total Points: 4 (minus two for decimal in wrong place)

17. $\underline{\text{Original} - \text{New}}$
       Original
       $\underline{30 - 25}$
          30
          $\underline{5}$
          30
        .167
     -16.7% (is negative because of decrease) **OR** 16.7% decrease
    Total Points: 4 (minus one for missing % label; minus one for missing negative or word "decrease"; minus one for decimal instead of percent)

7th Grade Semester 1 - Standards Score Sheet

Standard

1. _____/4   NS.3

2. _____/4   NS.3

3. _____/4   NS.3

4. _____/4   NS.3
5. _____/4   G.1
6. _____/4   G.1

7. _____/4   G.1

8. _____/4   RP.2

9. _____/4   RP.2

10. _____/4   RP.2

11. _____/4   EE.3

12. _____/4   EE.3

13. _____/4   EE.3

14. _____/4   RP.3

15. _____/4   RP.3

16. _____/4   RP.3

17. _____/4   RP.3

Total Score _____/

7th Grade Mathematics Semester 1 Assessment