7M-CA-TS-v1.0 (FFA1 Quarter 3 CA)

Preview Student

Preview Teacher

Preview Course

Page 1 of 4

Printed: 2/10/2014

213.224

Quarter 3 Common Assessment

Show all your work as you carefully solve the following proportions. Leave your answers in fraction form.

1. $\dfrac{77}{y} = \dfrac{98}{70}$ Ⓒ Ⓗ Ⓦ

2. $\dfrac{x}{15} = \dfrac{35}{75}$ Ⓒ Ⓗ Ⓦ

3. $\dfrac{x}{12} = \dfrac{25}{75}$ Ⓒ Ⓗ Ⓦ

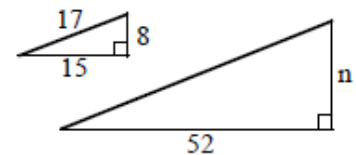4. A car is on sale for $5975. You offer 90% of that amount. How much are you offering for the car? Ⓒ Ⓗ Ⓦ

5. The original cost of a skateboard is $84. How much does it cost with a 30% discount? How much does it cost with a 45% discount? Show all of your work. Ⓒ Ⓗ Ⓦ

The triangles at right are similar.

6. Explain what "similar" means in this context. Ⓒ Ⓗ Ⓦ

7. Write an equation involving ratios that you could use to solve for n. Then solve for n. Ⓒ Ⓗ Ⓦ

7M-CA-TS-v1.0 (FFA1 Quarter 3 CA)

Preview Student

Preview Teacher

Preview Course
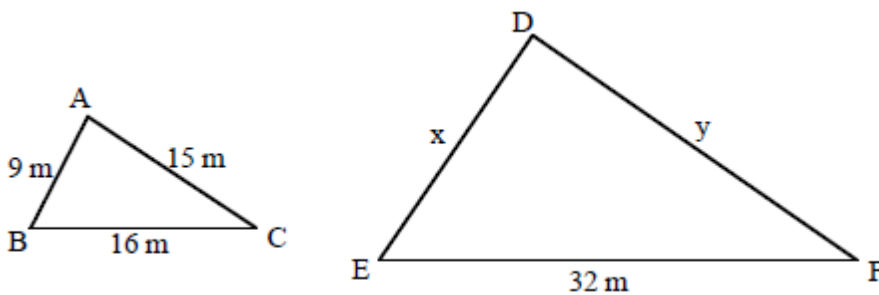
Page 2 of 4

Printed: 2/10/2014

213.224

8. Matthew is 2 meters tall and his shadow is 4 meters long. If the flag pole next to Matthew has a shadow that is 12 meters long at the same time of day, what is its height?

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9. Triangle ABC is similar to triangle DEF. Solve for the unknown sides.

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10. If it takes $\frac{1}{2}$ gallon of varnish to finish the "key" area of a gym's basketball court, which has an area of 200 square feet, how much varnish is needed to finish the entire gym floor, which has an area of 4500 square feet?

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11. Five quarts of milk are needed to enjoy two boxes of Crunch Munchy Cereal. How much milk will be needed for three boxes of cereal?

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7M-CA-TS-v1.0 (FFA1 Quarter 3 CA)

Preview Student

Preview Teacher

Preview Course

Page 3 of 4

Printed: 2/10/2014

213.224

12. Fred can average 620 miles in 9 hours of driving. How long will it take him to complete a 400-mile trip? ⓒ ⓗ ⓦ

Solve each problem using a proportion.

13. If Sam correctly answered 24 questions on a 30-question test, what percent did he earn? ⓒ ⓗ ⓦ

14. Janelle scored 70% on a test with 20 questions. How many questions did she answer correctly? ⓒ ⓗ ⓦ

Simplify the following expressions. It is very important to show every step in your work.

15. $\dfrac{30}{7} + \dfrac{3}{2}$ ⓒ ⓗ ⓦ

16. $\dfrac{30}{7} - \dfrac{3}{2}$ ⓒ ⓗ ⓦ

7M-CA-TS-v1.0 (FFA1 Quarter 3 CA)

Preview Student

Preview Teacher

Preview Course

Page 4 of 4

Printed: 2/10/2014

213.224

Simplify the following expressions. It is very important to show every step in your work

17. $\dfrac{30}{7} \cdot \dfrac{3}{2}$ ⓒ Ⓗ Ⓦ

18. $\dfrac{30}{7} \div \dfrac{3}{2}$ ⓒ Ⓗ Ⓦ

19. $\dfrac{3}{4} \div \dfrac{1}{5}$ ⓒ Ⓗ Ⓦ

20. $\dfrac{3}{7} \div \dfrac{9}{14}$ ⓒ Ⓗ Ⓦ

21. $9 \div \dfrac{6}{7}$ ⓒ Ⓗ Ⓦ

22. $\dfrac{2}{5} \div 7$ ⓒ Ⓗ Ⓦ

Compute:

23. $13.02 \div 3.1$ ⓒ Ⓗ Ⓦ

24. $18 \div 0.005$ ⓒ Ⓗ Ⓦ

7M-CA-TS-v1.0 (FFA2 Individual Test Chapter 3)

Preview Student

Page 1 of 3

Preview Teacher

Printed: 2/10/2014

Preview Course

213.20

Directions: Answer all of the following questions completely. Show all of your work to receive credit. You may use your toolkit. You may not use your partner or calculator. Do your best! Good luck☺

1.   Will's teacher is assigning new seats randomly. In one bag there are cards marked for each group; A, B, C, D, E, F, G, H, I. In another bag there are cards marked for each seat; 1, 2, 3, 4. Will pulls one card from each bag. What is the possibility that:

Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ

   a)   he will be in group G next?

   b)   he will sit in the 4th seat of a group?

   c)   he will sit in the 4th seat of group G?

2.   Use spinners or rectangles to solve the following problems. Show your work.   Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

Jody only wears skirts and sweaters to school. She has 3 green skirts, 5 red skirts and 7 black skirts. She has 4 white sweaters and 6 yellow sweaters.

   a) What is the probability that she will wear a white sweater with a green skirt?

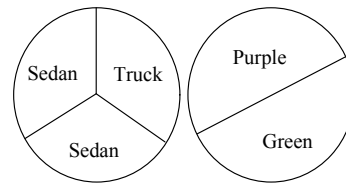   b) What is the probability that she will wear a black skirt with a yellow sweater?

7M-CA-TS-v1.0 (FFA2 Individual Test Chapter 3)

Preview Student
Preview Teacher
Preview Course

Page 2 of 3
Printed: 2/10/2014
213.20

3.   Complete the following table. Reduce all fractions.   Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓘ

Fraction	Decimal	Percent
$\frac{1}{5}$		
		2.8%
	0.45	

4.   Use the spinners at right to answer the following
      questions.

      a)   What is the probability of spinning a green
           sedan?

      b)   Fill in the probability table below with the
           probability of each event occurring.

                    Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

	Sedan		
Purple			

5.   Add/subtract these fractions and mixed numbers.

                    Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓘ Ⓙ Ⓚ Ⓛ Ⓜ Ⓝ Ⓞ

a) $\frac{1}{4} + \frac{2}{7}$ b) $\frac{1}{3} + \frac{5}{8}$

c) $\frac{5}{6} - \frac{2}{5}$ d) $4\frac{3}{7} - 1\frac{3}{5}$

7M-CA-TS-v1.0 (FFA2 Individual Test Chapter 3)

Preview Student

Preview Teacher

Preview Course

Page 3 of 3

Printed: 2/10/2014

213.20

6. Multiply these fractions and mixed numbers. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ

a) $\dfrac{1}{2} \cdot \dfrac{1}{4}$

b) $\dfrac{2}{3} \cdot \dfrac{1}{2}$

c) $2\dfrac{3}{5} \cdot 1\dfrac{5}{8}$

7. Thaddeus got 17 out of 20 on his math quiz. Ⓐ Ⓑ Ⓒ Ⓓ

Give his score as a fraction _____, a decimal _____, and a percent _____.