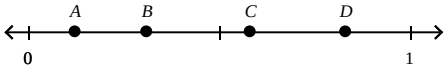
MS B Math MP4 Study Guide

Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

____ 1. Find the factors of 54.
a. 1, 2, 4, 13, 26, 52, 54
b. 1, 3, 29, 54
c. 1, 2, 3, 6, 9, 18, 27, 54
d. 1, 5, 11, 55

____ 2. Evaluate the expression $\frac{x^2 - y}{a + 2b}$ for $a = 2$, $b = 3$, $x = 5$, and $y = 4$. Write in simplest form.
a. $1\frac{1}{8}$
b. 3
c. $\frac{3}{4}$
d. $2\frac{5}{8}$

____ 3. Match each point with one of the following fractions: $\frac{5}{6}, \frac{7}{12}, \frac{1}{8}, \frac{5}{16}$



a. $A=\frac{5}{6}, B=\frac{5}{16}, C=\frac{7}{12}, D=\frac{1}{8}$
b. $A=\frac{1}{8}, B=\frac{5}{16}, C=\frac{7}{12}, D=\frac{5}{6}$
c. $A=\frac{7}{12}, B=\frac{5}{6}, C=\frac{5}{16}, D=\frac{1}{8}$
d. $A=\frac{5}{16}, B=\frac{1}{8}, C=\frac{7}{12}, D=\frac{5}{6}$

____ 4. A basketball tournament starts with 16 teams. In each round of the tournament, one half of the teams are eliminated. How many rounds does it take to determine a winner?
a. 5 rounds
b. 3 rounds
c. 6 rounds
d. 4 rounds

____ 5. Sapphire is making bouquets of balloons for a graduation party. She has 146 balloons and needs to put 7 balloons in each bouquet. How many bouquets can Sapphire make?
a. 20 bouquets
b. 19 bouquets
c. 18 bouquets
d. 21 bouquets

Compare. Use <, >, or =.

____ 6. –8.4 ■ –8.8
a. >
b. <
c. =

Find the sum.

____ 7. $\frac{5}{8} + \frac{1}{8}$
a. 6
b. $\frac{3}{4}$
c. $\frac{3}{8}$
d. $\frac{3}{32}$

____ 8. $8\frac{6}{10} + 1\frac{7}{10}$
a. $10\frac{3}{10}$
b. $22\frac{1}{10}$
c. $9\frac{13}{20}$
d. $9\frac{3}{10}$

____ 9. $16\frac{1}{9} \div 5\frac{2}{3}$

a. $21\frac{7}{9}$ b. $21\frac{1}{6}$ c. $21\frac{1}{9}$ d. $21\frac{1}{4}$

Find the difference.

____ 10. $\frac{6}{12} - \frac{4}{12}$

a. $\frac{1}{72}$ b. $\frac{1}{6}$ c. $\frac{1}{12}$ d. $\frac{5}{6}$

____ 11. Shayla is baking muffins that require $\frac{1}{2}$ cup vegetable oil. She only has $\frac{1}{3}$ cup left. How much more does she need?

a. $\frac{1}{3}$ cup b. $\frac{1}{5}$ cup c. $\frac{1}{6}$ cup d. $\frac{2}{5}$ cup

____ 12. Mai-li has $6\frac{1}{3}$ yd of material. Her new skirt will take $2\frac{1}{3}$ yd. How much material will she have left after the skirt is made?

a. 8 yd b. $8\frac{2}{3}$ yd c. 4 yd d. $12\frac{2}{3}$ yd

Find the product.

____ 13. $\frac{2}{3} \cdot 12$

a. 4 b. $12\frac{2}{3}$ c. 24 d. 8

Find the quotient.

____ 14. $\frac{11}{13} \div \frac{1}{3}$

a. $2\frac{7}{13}$ b. $\frac{13}{33}$ c. $\frac{11}{39}$ d. $1\frac{7}{39}$

____ 15. $\frac{1}{4} \div 13$

a. $3\frac{1}{4}$ b. 52 c. $\frac{4}{13}$ d. $\frac{1}{52}$

____ 16. $11 \div \frac{2}{3}$

a. $\frac{2}{33}$ b. $7\frac{1}{3}$ c. $\frac{3}{22}$ d. $16\frac{1}{2}$

Solve the equation.

____ 17. $\frac{1}{2}m - 6 = 8$

a. 4 b. 7 c. 14 d. 28

____ 18. $x + \frac{3}{4} = \frac{17}{18}$

a. 1 b. $\frac{7}{36}$ c. $\frac{10}{11}$ d. $1\frac{25}{36}$

____ 19. A retired person gets paid $\frac{6}{7}$ of his regular salary. If his retirement pay is $60,000, what was his regular salary?

a. $51,429 b. $70,000 c. $420,000 d. $8,571

____ 20. It took $7\frac{1}{3}$ gallons of gas to fill the tank of the family car. This is $\frac{1}{3}$ of the amount the tank can hold. How much gas does the tank hold?

a. 22 b. $7\frac{2}{3}$ c. $2\frac{4}{9}$ d. 7

____ 21. A rectangular patio is 4 yd 1 ft long and 5 yd 2 ft wide. What is the perimeter of the patio in yards?

a. $24\frac{5}{9}$ b. 10 c. $73\frac{2}{3}$ d. 20

Complete.

____ 22. $3\frac{3}{8}$ c = ■ fl oz

a. 33 fl oz b. $\frac{27}{64}$ fl oz c. 24 fl oz d. 27 fl oz

Choose the most precise measurement.

____ 23. $\frac{2}{32}$ in., $\frac{3}{12}$ in., $\frac{1}{12}$ ft, $\frac{1}{36}$ yd

a. $\frac{3}{12}$ in. b. $\frac{2}{32}$ in c. $\frac{1}{12}$ ft d. $\frac{1}{36}$ yd

Short Answer

24. Explain how to estimate the products or quotients of mixed numbers.

25. You have to find the difference $\frac{2}{25} - \frac{1}{15}$. What common denominator should you choose? Why?