

### Study Guide

1. List all the factors of 30 AND circle the one(s) that are prime.

1, 2, 3, 5, 6, 10, 15, 30

2. GCF (72, 48) = 24

$2 \overline{) 72} \begin{array}{r} 36 \\ 24 \\ 24 \end{array}$   $3 \overline{) 48} \begin{array}{r} 16 \\ 32 \\ 16 \end{array}$   $2 \times 2 \times 2 \times 3$   
 $3 \overline{) 12} \begin{array}{r} 4 \\ 12 \end{array}$   $2 \times 2 \times 2 \times 3$   
 LCM (9, 12) = 36

At the school fair every 5<sup>th</sup> person to enter gets a whistle and every 7<sup>th</sup> person gets a yo-yo. Answer the following questions:

4. What number person will be the first to get both items?

5, 10, 15, 20, 25, 30, 35  
 7, 14, 21, 28, 35 35<sup>th</sup> person

5. If 200 people come to the fair how many people will get both items?

35, 70, 105, 140, 175, 210

5 people

6. There are 60 girls and 45 boys participating in a baseball league. If teams must have the same number of boys and girls and everyone needs to be assigned to a team. What is the greatest number of teams the league can have?

$5 \overline{) 60} \begin{array}{r} 12 \\ 30 \\ 30 \end{array}$   $3 \overline{) 45} \begin{array}{r} 15 \\ 15 \\ 15 \end{array}$   
 5 x 3 = 15

7. Mrs. Simerly walks her two dogs every day. She takes them both outside at 7:00am. She takes Steve outside every 6 hours. She takes Bear outside every 8 hours. When is the next time Mrs. Simerly will take both dogs outside at the same time? 1 PM 6:48

6, 12, 18, 24  
 8, 16, 24

7:00 AM the next day

9: Mrs. Thomas has 76 pencils and 68 erasers.

8. She wants to create the largest number of pencil pouches. Each pouch will have the same number of pencils and the same number of erasers. She wants to use all of the pencils and erasers. How many pouches can she make? 4 pouches

$2 \overline{) 76} \begin{array}{r} 38 \\ 76 \end{array}$   $4 \overline{) 68} \begin{array}{r} 17 \\ 68 \end{array}$   
 19 pencils 17 erasers

9. How many pencils will be in each pouch?

19 pencils

10. Two runners are running a circular path. The first runner completes a round in 3 minutes. The second runner completes a round in 8 minutes. If they both started at the same place and time and go in the same direction, after how many minutes will they meet again at the starting point? LCM

3, 6, 9, 12, 15, 18, 21, 24  
 8, 16, 24

24 minutes

11. Find the GCF from the two number listed below, and rewrite the sum using the Distributive Property:  $2 \sqrt{50} \quad 4 \sqrt{2}$   
 $50 + 42$   
2 (25 + 21) 25 21

12. Amy said the GCF of 92 and 52 is 4. Is she correct? Explain your thinking.

Yes or No  
 (circle one)

Explains:  $2 \overline{) 92} \begin{array}{r} 46 \\ 92 \end{array}$   $4 \overline{) 52} \begin{array}{r} 13 \\ 52 \end{array}$   
23 13

13. LCM (2, 9) = 18

Fill in the blank to make this a true statement: 9, 18

2, 4, 6, 8, 10, 12, 14, 16, 18  
 6, 12, 18

14. Solve the expression

$3(6 + 12 \div 6) - 7 + 3$   
 $3(6 + 2) - 7 + 3$   
 $3(8) - 7 + 3$   
 $24 - 7 + 3$   
 17 + 3  
20

15. What is the missing exponent?

$(\frac{1}{2})^{\square} = \frac{1}{64}$

$2 \times 2 = 4$   
 $2 \times 2 \times 2 = 8$   
 $2 \times 2 \times 2 \times 2 = 16$   
 $2 \times 2 \times 2 \times 2 \times 2 = 32$   
 $2 \times 2 \times 2 \times 2 \times 2 \times 2 = 64$

16. Evaluate:  $(\frac{3}{5})^3$  ?

$\frac{3}{5} \times \frac{3}{5} \times \frac{3}{5} = \frac{27}{125}$