Name Key Date _____ Hour _____ Score _____

Quiz 4A – PRACTICE

Tell whether each number is divisible by 2, 3, 4, 5, 6, 9, and 10.

1. 60

2,3,4,6,5,10

2. 624

2,3,4,6,

3. 270

2,3,5,6,9,10

4. 200

2,4,5,10

5. 85

5

6. 408

2,4,3,6

Tell whether each number is prime or composite. Write the whole word. If the number is composite, give more than 2 of its factors.

7. 21

Comp. 1,3,7,21

8. 43

Prime

9. 91

comp. 1,7,13,91

10. 17

Prime

11. 81

comp. 1,3,9,27,81

12. 55

comp 1,5,11,55

Write the prime factorization of each number. Use the ladder diagram. Remember to use ONLY prime numbers!

13. 82 $2 \cdot 41$

2|82
41|41
1

14. 54 $2 \cdot 3 \cdot 3 \cdot 3$ or $2 \cdot 3^3$

2|54
3|27
3|9
3|3
1

15. 84 $2 \cdot 2 \cdot 3 \cdot 7$ or $2^2 \cdot 3 \cdot 7$

2|84
2|42
3|21
7|7
1

16. 16 $2 \cdot 2 \cdot 2 \cdot 2$ or 2^4

2|16
2|8
2|4
2|2
1

17. 100 $5 \cdot 5 \cdot 2 \cdot 2$ or $5^2 \cdot 2^2$

5|100
5|20
2|4
2|2
1

18. 225 $5 \cdot 5 \cdot 3 \cdot 3$ or $5^2 \cdot 3^2$

5|225
5|45
3|9
3|3
1

List all the factors of each number.

19. 25: 1, 5, 25

20. 28: 1, 2, 4, 7, 14, 28

For 21-23, show your work.

21. Sal writes the prime factorization of 32 as 2 x 2 x 2 x 2 x 2. Jay writes is as 2^5. Who is correct? Why?

Both. $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$ is the same as 2^5 and both equal 32.

22. Dan counted all the coins in his bank, and he had 70 quarters. Can he exchange the quarters for an even amount of dollar bills? How do you know? $70 \div 4$

17
4|70
-4
30
-28
2

No. he will get $17.50 which isn't an even amount of bills.

23. True or False. The prime factorization for 130 is 2 x 3 x 5^2. false

Why? Prime factorization of 130 is $2 \cdot 13 \cdot 5$

5|130
2|26
13|13
1