



**Without using a calculator, determine whether the first number is divisible by the second number.**

12) Is 952,042 divisible by 4?

A) Yes

B) No

12) \_\_\_\_\_

**Find the prime factorization.**

13)  $15^3 \cdot 33 \cdot 343^2$

A)  $3^4 \cdot 5 \cdot 7^3 \cdot 11$

B)  $3^4 \cdot 5^3 \cdot 7^2 \cdot 11$

C)  $3^2 \cdot 5^3 \cdot 7^6 \cdot 11$

D)  $3^4 \cdot 5^3 \cdot 7^6 \cdot 11$

13) \_\_\_\_\_

**Without using a calculator, determine whether the first number is divisible by the second number.**

14) Is 927,441 divisible by 5?

A) Yes

B) No

14) \_\_\_\_\_

**Classify as true or false.**

15) If  $\text{GCD}(a, b) = 2$ , then  $a$  or  $b$  can be odd.

A) True

B) False

15) \_\_\_\_\_

**Classify as true or false, assuming that  $a$ ,  $b$ ,  $c$ , and  $d$  are whole numbers and  $d \neq 0$ .**

16) If  $d|(a + b)$ , then  $d|a$  or  $d|b$ .

A) True

B) False

16) \_\_\_\_\_

**Find the LCM for the given numbers by an appropriate method.**

17)  $9^{10}$  and  $49^{10}$

A) 21

B)  $21^{10}$

C)  $21^{20}$

D) 441

17) \_\_\_\_\_

18) 48, 162, and 9

A) 648

B) 432

C) 1296

D) 324

18) \_\_\_\_\_

**Classify as true or false, assuming that  $a$ ,  $b$ ,  $c$ , and  $d$  are whole numbers and  $d \neq 0$ .**

19) If  $d|ab$ , then  $d|a$  or  $d|b$ .

A) True

B) False

19) \_\_\_\_\_

**Find the LCM for the given numbers by an appropriate method.**

20) 168 and 126

A) 504

B) 1008

C) 42

D) 1512

20) \_\_\_\_\_