

SAT Prep  
Day 9 Exponent Review

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Which of the following is equal to  $3^2 \cdot 3^3$ ?

- a)  $3^5$     b)  $3^6$     c)  $3^8$     d)  $9^5$     e)  $9^6$

2.  $\frac{3.6 \times 10^6}{1.8 \times 10^2} =$

- a)  $2 \times 10^3$     b)  $20 \times 10^3$     c)  $20 \times 10^4$   
d)  $(2 \times 10)^3$     e)  $(2 \times 10)^4$

3.  $(3^0)(8^1) =$

- a) 0    b) 1    c) 3    d) 8    e) 24

4.  $2^2 + 3^2 + (2 + 3)^2 =$

- a) 26    b) 35    c) 38    d) 46    e) 50

5. If  $n = 1$ , then  $4^n + 4^{n+1} =$

- a) 512    b) 128    c) 64    d) 24    e) 20

6. If  $8^{15} = 2^y$ , what is the value of  $y$ ?

- a) 15    b) 30    c) 45    d) 60    e) 75

7. If  $a^b = 5$ , then  $a^{b+2} =$

- a) 7    b)  $5a^2$     c) 25    d)  $25b$     e)  $10a$

8. If  $z^2 = 2$ , then  $z^3 =$

- a)  $-\sqrt{6}$     b)  $2\sqrt{2}$  only  
c)  $-2\sqrt{2}$  only    d)  $\sqrt{6}$   
e)  $2\sqrt{2}$  or  $-2\sqrt{2}$

9. If  $x^2 = 5$ , then  $3x^6 =$

- a) 15    b) 45    c) 90    d) 125    e) 375

10. What is the value of  $f(0) - f(1)$  for the function  $f(x) = x - 2^x$ ?

- a) -2    b) -1    c) 0    d) 1    e) 2

11. In the formula  $P = Qr + 5$ ,  $Q$  is constant and  $P = 11$  when  $r = 3$ .

What is the value of  $P$  when  $r$  is equal to 2?

- a) 2    b) 3    c) 4    d) 9    e) 15

12. The height  $h$  of an object thrown from the ground  $t$  seconds ago is given by the formula:

$$h = 64t - 16t^2$$

where  $h$  is measured in feet. How high is an object thrown 4 seconds ago?

- a) 0ft    b) 2ft    c) 4ft    d) 8ft    e) 16ft

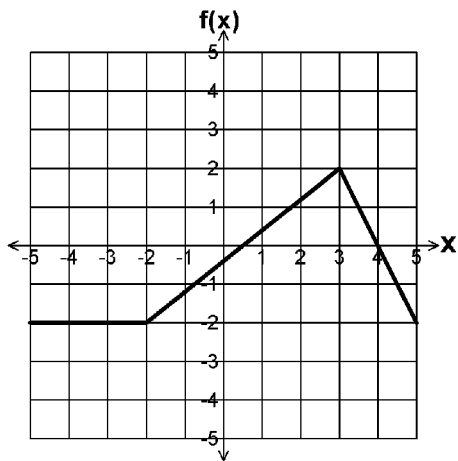
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13. If  $f(x) = 2x^2 - Bx + 4$  and  $f(3) = 13$ , what is the value of  $B$ ?

- a) -2    b) -1    c) 2    d) 3    e) 4



14. The graph of  $y = f(x)$  is shown above. If  $f(5) = k$ , which of the following is the value of  $f(k)$ ?

- a) -2    b) -1    c) 0    d) 1    e) 2

15. On a number line, what is the coordinate of the point that is halfway between  $-28$  and  $48$ ?

- a) 10    b) 14    c) 24.5    d) 36.5    e) 76

16. If  $n = 2$ , then  $(2n)^3 =$

- a) 12    b) 16    c) 36    d) 48    e) 64

17. If  $n = 1$ , then  $(n + 1)^{n+1} + (n + 1)^{n-1} =$

- a) 0    b) 4    c) 5    d) 6    e) 8

18. If  $n = -1$  then  $n^3 + n^2 =$

- a) -2    b) -1    c) 0    d) 1    e) 2

19. If  $a = 4$  and  $b = -5$ , what is the value of  $\frac{a+b}{a-b}$ ?

- a) -9    b) -1    c)  $-\frac{1}{9}$     d)  $\frac{1}{9}$     e) 9

20. If  $x = 3y$  and  $y = 4z$ , what is the value of  $z$  when  $x = 600$ ?

- a) 25    b) 30    c) 40    d) 50    e) 60

1.  
Answer:        a  
CodePath:    EAS.SAT.A.E.3

2.  
Answer:        b  
CodePath:    EAS.SAT.A.E.5

3.  
Answer:        d  
CodePath:    EAS.SAT.A.E.11

4.  
Answer:        c  
CodePath:    EAS.SAT.A.E.13

5.  
Answer:        e  
CodePath:    EAS.SAT.A.E.17

6.  
Answer:        c  
CodePath:    EAS.SAT.A.E.19

7.  
Answer:        b  
CodePath:    EAS.SAT.A.E.25

8.  
Answer:        e  
CodePath:    EAS.SAT.A.E.26

9.  
Answer:        e  
CodePath:    EAS.SAT.A.E.28

10.  
Answer:        c  
CodePath:    EAS.SAT.G.B.18

11.  
Answer:        d  
CodePath:    EAS.SAT.G.A.1

12.  
Answer:        a  
CodePath:    EAS.SAT.G.A.4

13.  
Answer:        d  
CodePath:    EAS.SAT.G.F.13

14.  
Answer:        a  
CodePath:    EAS.SAT.G.G.36

15.  
Answer:        a  
CodePath:    EAS.SAT.C.L.2

16.  
Answer:        e  
CodePath:    EAS.SAT.B.A.5

17.  
Answer:        c  
CodePath:    EAS.SAT.B.A.6

18.  
Answer:        c  
CodePath:    EAS.SAT.B.A.7

19.  
Answer:        c  
CodePath:    EAS.SAT.B.A.17

20.  
Answer:        d  
CodePath:    EAS.SAT.B.A.29