

10-8-13
3' Trig

SAT 2-4

⑩ If \sqrt{x} is an odd integer, which must be even?

$\sqrt{9} \rightarrow 3$ odd integer
 $\sqrt{25} \rightarrow 5$

$\sqrt{49} \rightarrow 7$
 $\sqrt{81} \rightarrow 9$

- A.) x
- B.) $3\sqrt{x}$
- C.) $\sqrt{2x}$
- ✓ D.) $2\sqrt{x}$
odd

odd · odd = odd
even · even = even
odd · even = even

⑪ $4 + \sqrt{b} = 7.2$, so what is

$\frac{-4}{\sqrt{b} = 3.2}$ $4 - \sqrt{b}$
 \downarrow \downarrow
 $4 - 3.2 = .8$

⑫ $\frac{b-a}{a} = x$ $\frac{b+a}{a} = y$

what is $(x-y)(x+y)$?

$\left(\frac{b-a}{a} - \frac{b+a}{a}\right) \left(\frac{b-a}{a} + \frac{b+a}{a}\right)$

$\left(\frac{b-a-b-a}{a}\right) \left(\frac{b-a+b+a}{a}\right)$

$\left(\frac{-2a}{a}\right) \left(\frac{2b}{a}\right)$

$-2 \left(\frac{2b}{a}\right)$

$\frac{-4b}{a}$

①9 If $\sqrt{2p} = \sqrt{18}$, what is p ?

$$2p = 18$$

$$p = 9$$

②0 Avg. of 5 #s is 30. If least of these is 7, what is the greatest possible value of any of these numbers?

$$\begin{array}{r} + + + + = 150 \\ + + + + = 150 \\ \hline 7 + 8 + 9 + 10 + 116 = 150 \end{array}$$

34

$\begin{array}{r} 5 \\ \times 30 \\ \hline \end{array}$

SAT 2-6

① 5 x ^{Avg.} 80 = 400

$$\underline{50} + \underline{50} + \underline{100} + \underline{100} + \underline{100} = 400$$

⑩ When the positive integer k is \div by 7, the remainder is 6. What is the remainder when $k+2$ is divided by 7? ①

$$\frac{k}{7} = r.6$$

$$\frac{13+1}{7} = 1 r.6$$

⑪ $3^{y+4} = 81$

$$3^{\boxed{4}} = 81 \quad \therefore y = 0$$

⑫ $a^b = 64$, what is smallest possible value of $a+b$?

$$8 \cdot 8 = 64$$

$$8+8=16$$

10-8-13
4th Tris

SAT 2-4

16) If \sqrt{x} is an odd integer,
which must be even?

$$\begin{aligned} \sqrt{4} &= 2 \\ \sqrt{9} &= 3 \quad \therefore x \text{ is odd integer} \\ \sqrt{16} &= 4 \\ \sqrt{25} &= 5 \end{aligned}$$

- A.) x
- B.) $3\sqrt{x}$ = odd
- C.) $\sqrt{2x}$ =
- D.) $2\sqrt{x}$ = even

odd · odd = odd
even · even = even
odd · even = even

17) $4 + \sqrt{b} = 7.2$ what is $4 - \sqrt{b}$

$$\begin{array}{r} 4 + \sqrt{b} = 7.2 \\ -4 \quad -4 \\ \hline \sqrt{b} = 3.2 \end{array}$$

$4 - 3.2 = .8$

18) $\frac{b-a}{a} = x$ $\frac{b+a}{a} = y$

What is $(x-y)(x+y)$?

$$\left(\frac{b-a}{a} - \frac{b+a}{a}\right) \cdot \left(\frac{b-a}{a} + \frac{b+a}{a}\right)$$

$$\frac{b-a-b-a}{a} \cdot \frac{b-a+b+a}{a}$$

$$\frac{-2a}{a} \cdot \frac{2b}{a}$$

$$-2 \cdot \frac{2b}{a} = \frac{-4b}{a}$$

19) If $\sqrt{2p} = \sqrt{18}$, what is p ?

$$2p = 18$$
$$p = 9$$

20) Avg of 5 different #s is 30. If least # is 7, what is greatest possible value of any of the #s?

$$30 \times 5 = 150$$

$$\underline{7} + \underline{8} + \underline{9} + \underline{10} + \underline{\quad} = 150$$
$$34 + \underline{116} = 150$$

2-6 SAT

9) 5 players score 0-100
Avg was 80. How many could have scored 50?
 $80 \times 5 = 400$ ← add up

$$\underline{50} + \underline{50} + \underline{100} + \underline{100} + \underline{100} = 400$$

10) When k is \div by 7, the remainder is 6.
What is remainder when $k+2$ is divided by 7.

$$\frac{k}{7} = r.6 \quad k+2 \text{ has a remainder of } 1.$$

$$\frac{20+1}{7} = 2r.6$$

11) If $3^{\boxed{y+4}} = 81$, what is y ?

$$3^{\boxed{4}} = 81$$

$$y = 0$$

12) $ab = 64$; what is smallest value of $a+b$?

$$8 \cdot 8 = 64 \quad 8 + 8 = 16$$

$$ab = 20 \quad 1, 20 = 21$$
$$a+b = \quad 2, 10 = 12$$
$$\quad \quad 4, 5 = 9$$