MATHS

BOOKS - KAPLAN INC MATHS (ENGLISH)

THE MATHOD OF SAT MATH QUESTIONS

1. A cargo airpolane has a maximum takeoff weight of 19,000 kilograms. The airplane, crew, and fuel have a combined weight of $14,750$ kilogrms. The airpolne will be loaded with n identical cargo containers, each of which has a weight of 125 kilograms. What is the greatest value of n such that the airplane does not exceed its maximum takeoff weight ?

A. 28

B. 34

C. 118

D. 152

Answer: B

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2. A certain model of laptop comuter is priced at $\$550$ at a local electronics store. The same model laptop at an online retailer4 sells for $\frac{9}{10}$ of the electronics store's price. At a luxury department store, the same model laptop sell for $\frac{7}{5}$ of the electronics store's price. How

many dollars mre is the cost of the laptop at the luxury department store than at the online retailer ?

A. 198

B. 220

C. 275

D. 495

Answer: C

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3. A stack of 75 identical plastic plates forms a column approximately $9\frac{7}{8}$ inches tall. At this rate, which of the following is closest to the number of plates that would be needed to form a column 20 inches tall ?

A. 125

B. 150

C. 185

D. 220

Answer: B

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4. Last monts, kiera ran 22 more miles than Bianca did. If they ran a combined total of 86 miles, how many miles did bianca run ?

A. 27

B. 37

C. 43

D. 54

Answer: B

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5. If $\frac{4x}{2y} = 4$, what is the value of $\frac{3y}{x}$?

A. $\frac{3}{4}$

B. $\frac{4}{3}$

C. $\frac{3}{2}$

D. 2

Answer: C

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6.

x	2	4	6	8	10
y	$\frac{7}{5}$	$\frac{11}{5}$	$\frac{15}{5}$	$\frac{19}{5}$	$\frac{23}{5}$

Which of the following equations realates y to x accoreing to the values shown in the table above ?

A. $y = \left(\frac{2}{5}\right)^x - \frac{7}{5}$

B. $y = \left(\frac{3x}{5}\right)^2 - 2$

C. $y = \frac{5}{2}x - \frac{3}{5}$

D. $y = \frac{2}{5}x + \frac{3}{5}$

Answer: D

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7. $n - \sqrt{c+5} = 1$

In the equation above, c is a constant. If $n = 5$, what is the value of c ?

A. -1

B. 0

C. 3

D. 11

Answer: D

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8. At a child's lemonade stand, p pitchers of lemonade are made by adding m packets of lemonade mix to cold water. If $m = 2p + 4$, how many more packets of lemonde mix are needed to make each additional pitcher of lemonade ?

A. 0

B. 1

C. 2

D. 4

Answer: C

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9. A health club changes a one-time membership free of $\$125$ plus n dollars for each month. If a membe pays $\$515$ dollars for the first six months, inc,.uding the membership fee, what is the value of n ?

A. 55

B. 65

C. 75

D. 85

Answer: B

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10. If $x > 0$, which of the following is equivalent to $\dfrac{2}{\frac{1}{x+6} + \frac{1}{x+2}}$?

A. $x^2 + 8x + 12$

B. $\frac{x+4}{x^2+8x+12}$

C. $2x+8$

D. $\frac{x^2+8x+12}{x+4}$

Answer: D

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