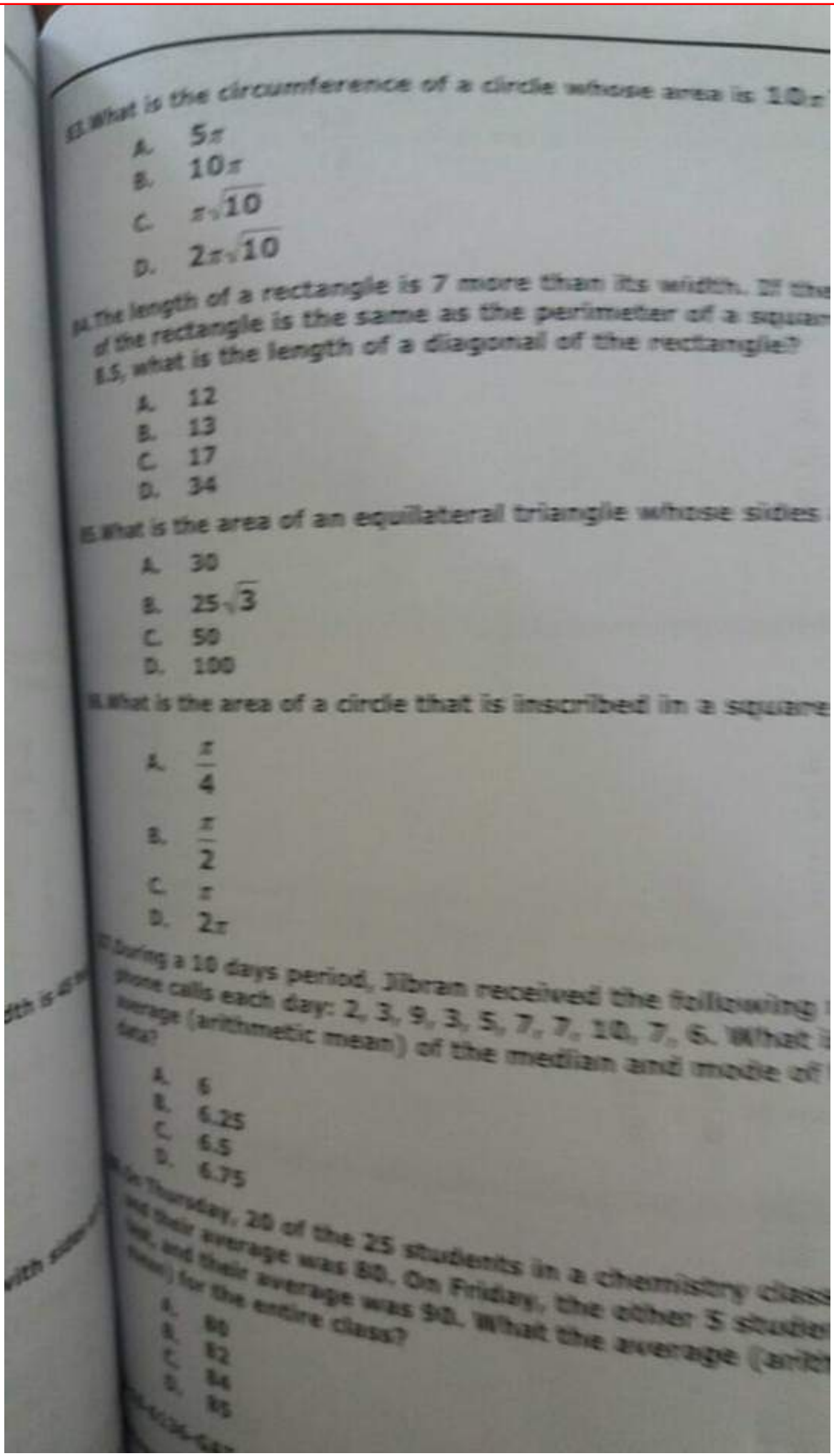

13. What is the circumference of a circle whose area is 10π?

A. 5π
B. 10π
C. $\pi\sqrt{10}$
D. $2\pi\sqrt{10}$

14. The length of a rectangle is 7 more than its width. If the perimeter of the rectangle is the same as the perimeter of a square whose area is 25, what is the length of a diagonal of the rectangle?

A. 12
B. 13
C. 17
D. 34

15. What is the area of an equilateral triangle whose sides

A. 30
B. $25\sqrt{3}$
C. 50
D. 100

16. What is the area of a circle that is inscribed in a square

A. $\frac{\pi}{4}$
B. $\frac{\pi}{2}$
C. π
D. 2π

17. During a 10 days period, Jibran received the following phone calls each day: 2, 3, 9, 3, 5, 7, 7, 10, 7, 6. What is the average (arithmetic mean) of the median and mode of the data?

A. 6
B. 6.25
C. 6.5
D. 6.75

18. On Thursday, 20 of the 25 students in a chemistry class had their average was 80. On Friday, the other 5 students were absent, and their average was 90. What the average (arithmetic mean) for the entire class?

A. 80
B. 82
C. 84
D. 85

5. If x is positive and $y = 5x^2 + 3$, which of the follow expression for x in terms of y?

A. $\sqrt{\frac{y}{5} - 3}$

B. $\sqrt{\frac{y-3}{5}}$

C. $\frac{\sqrt{y-3}}{5}$

D. $\frac{\sqrt{y}-3}{5}$

E. $\frac{\sqrt{y}-\sqrt{3}}{5}$

6. If p and q are primes greater than 2, which of the be true?

I. p + q is even
II. pq is odd
III. $p^2 + q^2$ is even

A. I only
B. II only
C. I and II only
D. I and III only
E. I, II and III

7. If $a = 9 \times 8321$ *and* $b = 9 \times 7321$, wha a- b?

A. 6000
B. 7000
C. 8000
D. 9000

8. If an angle is equal to 90°, then it is called:

A. $\frac{1}{56}$

B. $\frac{1}{48}$

C. $\frac{1}{8}$

D. $\frac{1}{4}$

90. Simplify the complex fraction $\frac{\frac{4}{9}}{\frac{2}{5}}$.

A. $\frac{1}{2}$

B. $\frac{2}{5}$

C. 1

D. $1\frac{1}{9}$

91. Find the sum of $\frac{n}{6} + \frac{2n}{5}$.

A. $\frac{13n}{30}$

$\frac{1}{x} - \frac{1}{y} = \frac{1}{z}$, then z is equal to which of the following

A. $\frac{y-x}{xy}$

B. $\frac{x-y}{xy}$

C. xy

D. $\frac{xy}{x} - y$

E. $\frac{xy}{y-x}$

vide $\frac{x-y}{x+y}$ by $\frac{y-x}{y+x}$.

A. 1
B. -1
C. $\frac{(x-y)^2}{(x+y)^2}$
D. $-\frac{(x-y)^2}{(x+y)^2}$
E. 0

the perimeter of a rectangle is 68 yards and the wid
e length is: (1 yard = 3 feet)

A. 10 yd
B. 18 yd
C. 20 ft
D. 46 ft
E. 86 ft

/hat is the difference of the areas of two squares with
nd 4, respectively?

A. 3
B. 4
C. 9

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If $a = 4b$, what percent of 2a is 2b?

A. 10%
B. 20%
C. 25%
D. 26%
E. 40%

Divide and simplify: $\frac{\sqrt{32b^3}}{\sqrt{8b}}$

A. $2\sqrt{b}$
B. $\sqrt{2b}$
C. 2b
D. $\sqrt{2b^2}$
E. $b\sqrt{2b}$

Tania has Rs. 90, 000 at the end of a year as savings. Calcula
payable zakat at the rate of 2.5%?

A. Rs. 1850
B. Rs. 1900
C. Rs. 1950
D. Rs. 2250

$4 + y = 14 - 4y$, then $y = ?$

A. -4
B. 0
C. $\frac{5}{8}$
D. $\frac{4}{5}$
E. 2

$3^m = 81$, then $m^3 = ?$

A. 9
B. 16
C. 27
D. 54
E. 64

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66. If a = 4b, what percent of 2a is 2b?

A. 10%
B. 20%
C. 25%
D. 26%
E. 40%

67. Divide and simplify: $\frac{\sqrt{32b^3}}{\sqrt{8b}}$

A. $2\sqrt{b}$
B. $\sqrt{2b}$
C. 2b
D. $\sqrt{2b^2}$
E. $b\sqrt{2b}$

68. Tania has Rs. 90, 000 at the end of a year as savings. Calc
payable zakat at the rate of 2.5%?

A. Rs. 1850
B. Rs. 1900
C. Rs. 1950
D. Rs. 2250

69. If 4 + y = 14 - 4y, then y =?

A. -4
B. 0
C. $\frac{5}{8}$
D. $\frac{4}{5}$
E. 2

If $3^m = 81$, then m^3 =?

A. 9
B. 16
C. 27
D. 54
E. 64

6136-GAT A-YELLOW-040318

89. For any positive integer n, n! means the product of all the integers from 1 to n. What is the value of $\frac{6!}{8!}$?

A. $\frac{1}{56}$

B. $\frac{1}{48}$

C. $\frac{1}{8}$

D. $\frac{1}{4}$

90. Simplify the complex fraction $\frac{\frac{4}{9}}{\frac{2}{5}}$.

A. $\frac{1}{2}$

B. $\frac{2}{5}$

C. 1

D. $1\frac{1}{9}$

91. Find the sum of $\frac{n}{6} + \frac{2n}{5}$.

A. $\frac{13n}{30}$

B. $17n$

C. $\frac{3n}{30}$

D. $\frac{17n}{}$

(83) $C = ?$

Area of circle $= 10\pi$

$\pi r^2 = 10\pi$

$r^2 = 10$

$r = \sqrt{10}$

$C = 2\pi r$

$\boxed{C = 2\pi\sqrt{10}}$ option D

(78) $y = 5x^2 + 3$

$y - 3 = 5x^2$

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

$\boxed{x = \sqrt{\frac{y-3}{5}}}$ option – B

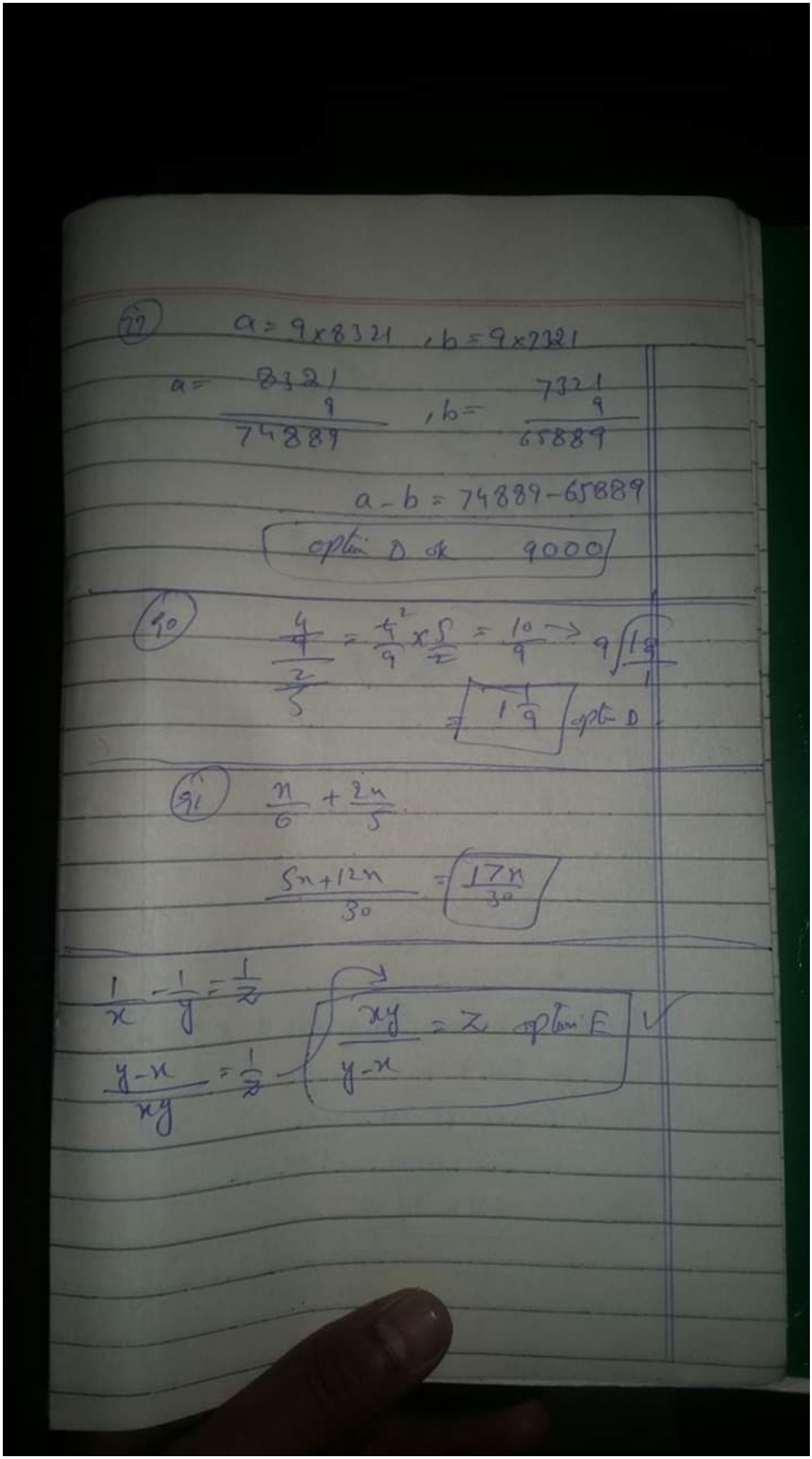
(76) Suppose. P & Q are Prime numbers as 5, 7

i) $5+7 = 12$ that is even

ii) PQ is odd $= 5 \times 7 = 35$ that is odd.

iii) $P+Q^2$ is even $= 5^2 + 7^2 = 25 + 49 = 74$ that is even

So $\boxed{\text{option E I, II \& III}}$ ok



(39) $a = 9 \times 8321$, $b = 9 \times 7321$

$a = \frac{8321}{9} = 74889$, $b = \frac{7321}{9} = 65889$

$a - b = 74889 - 65889$

option D ✗ 9000

(40) $\frac{\frac{4}{9}}{\frac{2}{5}} = \frac{4}{9} \times \frac{5}{2} = \frac{10}{9} \rightarrow 9\overline{)19}$ (1)

$= 1\frac{1}{9}$ option D.

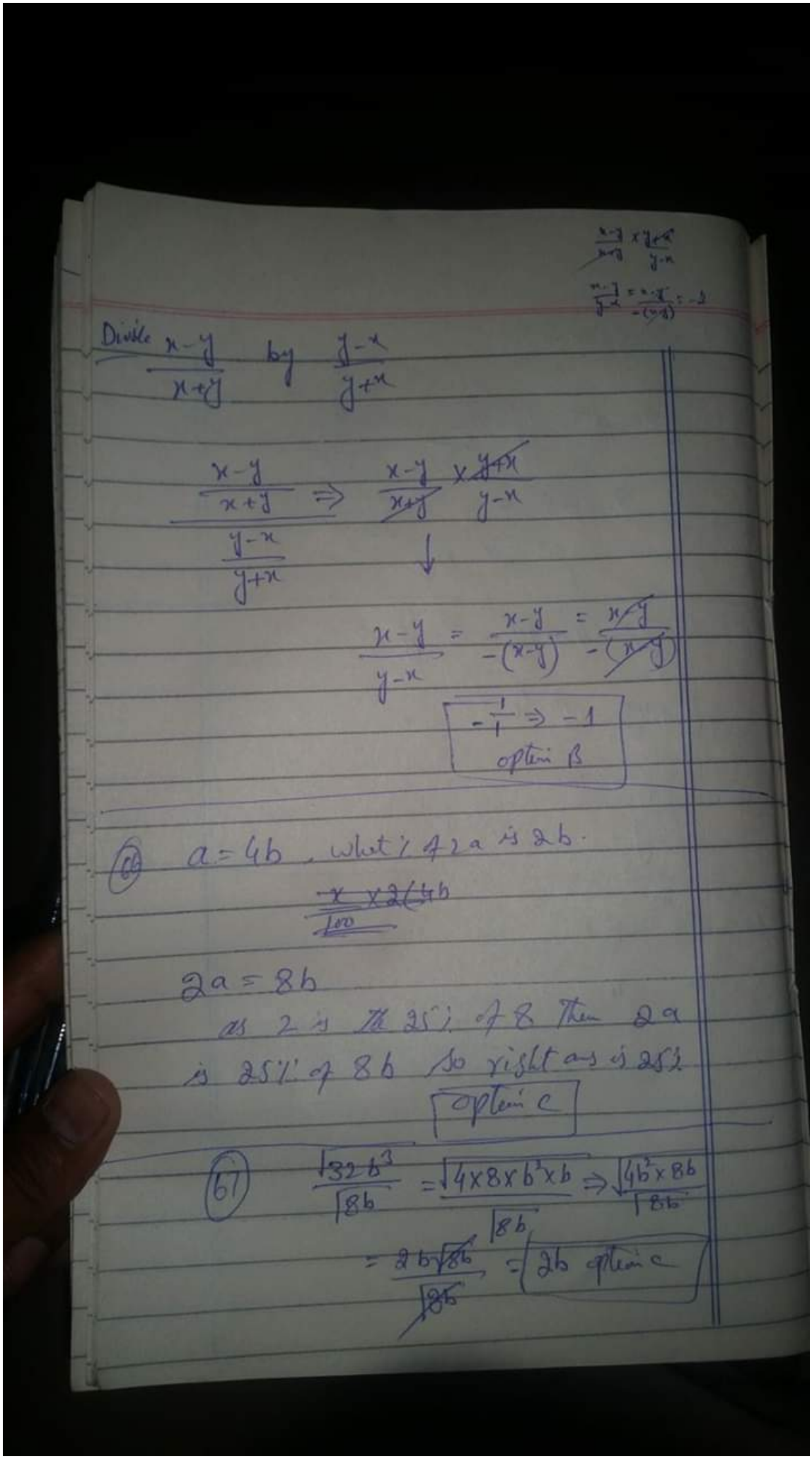
(41) $\frac{x}{6} + \frac{2x}{5}$

$\frac{5x + 12x}{30} = \frac{17x}{30}$

$\frac{1}{x} - \frac{1}{y} = \frac{1}{z}$

$\frac{y-x}{xy} = \frac{1}{z}$

$\frac{xy}{y-x} = z$ option E ✓



Divide $\frac{x-y}{x+y}$ by $\frac{y-x}{y+x}$

$$\frac{\frac{x-y}{x+y}}{\frac{y-x}{y+x}} \Rightarrow \frac{x-y}{x+y} \times \frac{y+x}{y-x}$$

$$\frac{x-y}{y-x} = \frac{x-y}{-(x-y)} = -\frac{1}{1} \Rightarrow -1$$

option B

(66) $a = 4b$, what % of $2a$ is $2b$.

$$\frac{x}{100} \times 2(4b)$$

$2a = 8b$

as 2 is 25% of 8 then $2a$ is 25% of $8b$ so right ans is 25%

option c

(67) $$\frac{\sqrt{32b^3}}{\sqrt{8b}} = \frac{\sqrt{4 \times 8 \times b^2 \times b}}{\sqrt{8b}} \Rightarrow \frac{\sqrt{4b^2 \times 8b}}{\sqrt{8b}}$$

$$= \frac{2b\sqrt{8b}}{\sqrt{8b}} = 2b$$ option c

(68) 90,000 × 2.5%

$90{,}000 \times \frac{25}{10} \times \frac{1}{100}$ $\quad \frac{90}{25}$

$90 \times 25 =$ $\quad \frac{450}{180\times}$

2250

(option D)

(69) $4 + y = 14 - 4y$, then $y = ?$

$y + 4y = 14 - 4$

$5y = 10$

$y = 2$ (option E)

(70) $3^m = 81$, then $m^3 = ?$

$3^m = 3^4 \Rightarrow m = 4$ if $m = 4$ then

$m^3 = 4^3 = 64$ Ans option E