

1. If $x - 5 = 15$ then what is the value of $2x$?

a) 10

b) 20

c) 40

d) 100

e) 200

$$x - 5 = 15$$

$$x = 20$$

TRAP

$$2x = 40$$

$$\Sigma = \bar{X} \cdot n$$
$$28 = 14 \cdot 2$$

(with averages always)
think about the sum)

2. If x and y are prime numbers, and the average (arithmetic mean) of x and y is 14, then x could be which of the following?

- a) 2
- b) 3
- c) 7
- d) 11
- e) 13

Prime		Prime	
X	+	Y	= 28
2		26	
3		25	
7		21	
11		17	

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3. Series T is a sequence of numbers where each term after the first term is x greater than the term that precedes it. If the sum of the first and last term of series T is 14, then what is the sum of the first three terms of series T and the last three terms of series T?

a) -7

b) 7

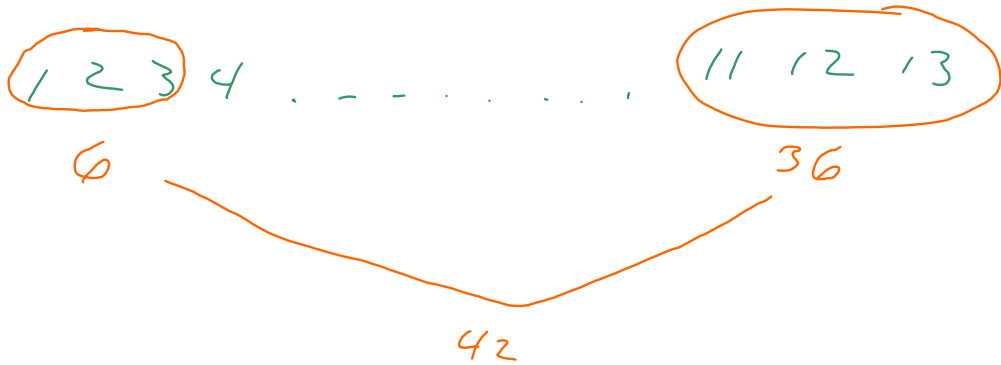
c) 14

d) 42

e) 84

$$x = 1$$

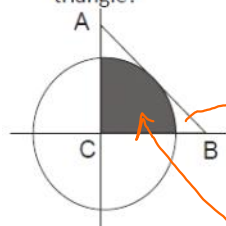
$$\begin{array}{cccccc} 1 & 2 & 3 & 4 & 5 & 6 \end{array}$$



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$$\pi = 3.14$$

4. In the figure below triangle ABC is drawn tangent to the circle. If triangle ABC is an isosceles right triangle with an area of 4, what is the area of the shaded region of the circle within the area of the triangle?



- a) π
- b) 2π
- c) $2\pi\sqrt{2}$
- d) 4π
- e) 8π

if $\Delta ABC = 4$ then is less than 4

$$\pi = 3.14$$

5. If the area of a square is 80, then what is the area of the largest circle that could fit within the area of the square?

a) $10\pi \sim 31$

Too small

b) $20\pi \sim 62$

c) $25\pi \sim 78$

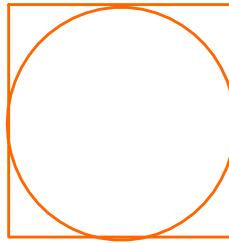
Too big

d) $40\pi \sim 124$

Too big

e) $80\pi \sim 248$

Too big

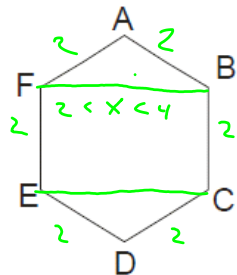


$$A_{\square} = 80$$

$$A_{\circ} < 80$$

$$\sqrt{3} = 1.7$$

6. The hexagon ABCDEF is regular. Each side of the hexagon is 2 feet. What is the area of rectangle BCEF?



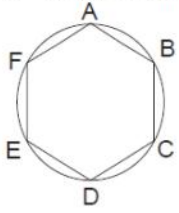
- ~~a) 4 square feet~~ $2 \cdot 2$ Too small
- ☒ b) $4\sqrt{3}$ square feet
- ~~c) 8 square feet~~ $2 \cdot 4$ Too big
- ~~d) $4 + 4\sqrt{3}$ square feet~~
- ~~e) 12 square feet~~

$$\pi = 3.14$$

$$\sqrt{2} = 1.4$$

$$\sqrt{3} = 1.7$$

7. Regular hexagon ABCDEF is inscribed in a circle with area 16π . What is the area of hexagon ABCDEF?



- a) 4
- b) $6\sqrt{3}$
- c) $12\sqrt{2}$ < Half
- d) $24\sqrt{3}$
- e) $48\sqrt{2}$ > 50

$$A_0 = 16\pi \approx 50$$

Logic Hex < 50

8. A computer salesman sells an average of 15 computer systems a month at \$4,200 per system. He earns a basic salary of \$22,000 per year plus a commission of 7.5% on monthly sales made over a level of \$25,000 per month. What is his expected annual income?

a) \$78,700
b) \$75,200
c) \$66,700
d) \$56,200
e) \$34,200

$$15 \cdot 4 = 60$$

$$60 - 25 = 35$$

$$35 \cdot 7\frac{1}{2}\% \cdot 12$$

$$10\% \cdot 12 = 1.2$$

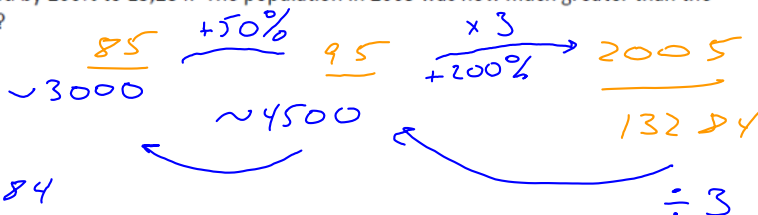
$$7\frac{1}{2}\% \cdot 12 \approx 1$$

$$35 \cdot 1 = 35$$

$$35 + 22 = \textcircled{57}$$

9. From 1985 to 1995, the population of Jamestown increased by 50%, and from 1995 to 2005, the population increased by 200% to 13,284. The population in 2005 was how much greater than the population in 1985?

a) 2,952
b) 4,428
c) 7,971
d) 8,856
e) 10,332



$$\begin{array}{r} 13284 \\ - 3000 \\ \hline 10084 \end{array}$$

10. It costs 10 cents a kilometer to fly and 12 cents a kilometer to drive. If you travel 200 kilometers, flying x kilometers of the distance and driving the rest, then the cost of the trip in dollars is?

- a) 20
- b) 24
- c) $24 - 2x$
- d) $24 - 0.02x$
- e) $2,400 - 2x$

Insert → $x = 100$ →

200

10¢

F

x

100

↓

\$10

12¢

D

Rest

100

↓

\$12

$= \$22$

~~a) 20~~

~~b) 24~~

~~c) $24 - 200$~~

d) $24 - 2 = 22$

~~e) $2400 - 200$~~

11. When ticket sales began, Pat was the n th customer in line for a ticket, and customers purchased their tickets at the rate of x customers per minute. Of the following, which best approximates the time, in minutes, that Pat had to wait in line from the moment ticket sales began?

~~a)~~ $(n-1) \times (5-1)^2$

~~b)~~ $n + x - 1$ $5 + 2 - 1$

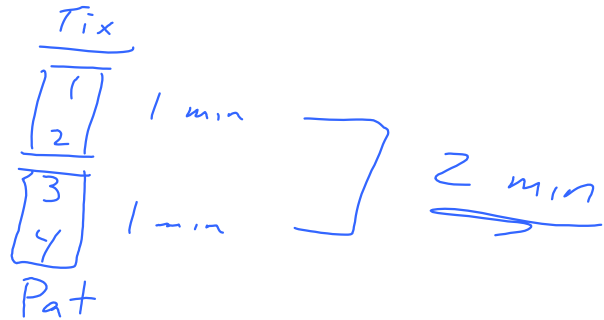
c) $\frac{n-1}{x}$ $\frac{5-1}{2} = 2$

~~d)~~ $\frac{n-1}{n}$ $\frac{2}{5-1}$

~~e)~~ $\frac{n}{x-1}$ $\frac{5}{2-1}$

$n = 5$

$x = 2$



12. The R students in a class agree to contribute equally to buy their teacher a birthday present that costs y dollars. If x of the students later fail to contribute their share, which of the following represents the additional number of dollars that each of the remaining students must contribute in order to pay for the present?

extra \$?

- $\frac{80}{10}$
~~a) $\frac{y}{R}$~~
 $\frac{80}{8}$
~~b) $\frac{y}{R-x}$~~
 $\frac{80-?}{8}$
~~c) $\frac{xy}{R-x}$~~
 $\frac{80 \cdot 2}{10 \cdot 8}$
 d) $\frac{y}{R(R-x)}$
 $\frac{80}{80}$
~~e) $\frac{y}{R(R-x)}$~~

$R = 10$
 $y = 80$
 $x = 2$
 $\$8$ each
 now only 8 payers
 so $\frac{80}{8} = \$10$ each
 $\$2$ extra

13. If M and N are positive integers that have remainders of 1 and 3 respectively, when divided by 6.
Which of the following could not be a possible value of $M+N$?

- a) 86
b) 52
c) 34
d) 28
e) 10

Handwritten work showing the solution process:

For M (remainder 1): $M \equiv 1 \pmod{6}$. Possible values: 1, 7, 13, 19, 25, 31, ...

For N (remainder 3): $N \equiv 3 \pmod{6}$. Possible values: 3, 9, 15, 21, 27, 33, ...

Summing possible values of M and N :

- $1 + 3 = 4$
- $7 + 3 = 10$
- $13 + 3 = 16$
- $19 + 3 = 22$
- $25 + 3 = 28$
- $31 + 3 = 34$
- $37 + 3 = 40$
- $43 + 3 = 46$
- $49 + 3 = 52$
- $55 + 3 = 58$
- $61 + 3 = 64$
- $67 + 3 = 70$
- $73 + 3 = 76$
- $79 + 3 = 82$
- $85 + 3 = 88$
- $91 + 3 = 94$
- $97 + 3 = 100$

From the list above, the value 86 is not present, indicating it cannot be a possible value of $M+N$.

14. Mike and Nancy weigh a combined T pounds. Mike weighs 10 pounds more than Nancy. Their son Edward weighs $T/4$ pounds more than Nancy. In terms of T what is Edward's weight in pounds?

- ~~a) $(T/4) - 20$~~
- ~~b) $(3T/2) - 5$~~
- ~~c) $5T/4$~~
- ~~d) $4T - 10$~~
- ☒ e) $(3T/4) - 5$

$$\frac{300}{4} - 5 = 70$$

insert

$$T = 100$$

$$M + N = 100$$

$$M = 55$$

$$N = 45$$

$$\begin{aligned} \text{Edward} &= 45 + 25 \\ &= 70 \end{aligned}$$

hint to insert

15. The length of two sides of a right triangle are $d/3$ and $d/4$, where $d > 0$. If one of these sides is the hypotenuse, what is the length of the third side of the triangle?

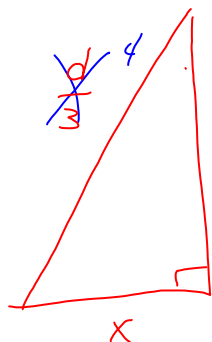
a) $\frac{5d}{12}$ ~~$\frac{5d}{12}$~~

b) $\frac{d}{\sqrt{7}}$ ~~$\frac{d}{\sqrt{7}}$~~

c) $\frac{d}{5}$ ~~$\frac{d}{5}$~~

d) $\frac{d}{12}$ ~~$\frac{d}{12}$~~

e) $\frac{d\sqrt{7}}{12}$ ~~$\frac{d\sqrt{7}}{12}$~~



~~$\frac{d}{4}$~~ 3

insert $d = 12$

$$x^2 + 3^2 = 4^2$$

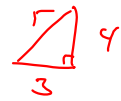
$$x^2 = 16 - 9$$

$$x^2 = 7$$

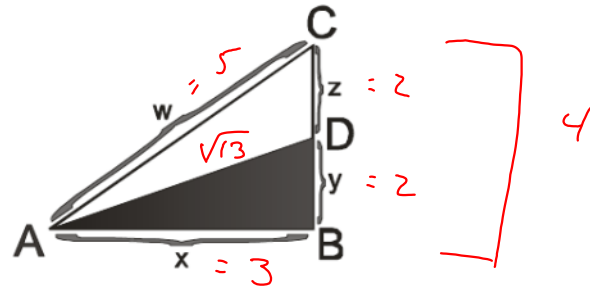
$$x = \sqrt{7}$$

get as you can see not all \triangle 3+4 have a 5

good insert



16. If the shaded area is one half the area of the triangle ABC and the angle ABC is a right angle, then the length of the line segment AD is?



a) $\frac{w}{2}$
 $\frac{5}{2}$

b) $\frac{w+x}{2}$
 $\frac{8}{2}$

c) $\sqrt{2x^2+z^2}$
 $\sqrt{18+4}$

d) $\sqrt{w^2-3y^2}$
 $\sqrt{25-12}$

e) $\sqrt{y^2+z^2}$
 $\sqrt{8}$

17. If $x \neq 3$, then

$$\frac{3x(x-3)-x+3}{x-3}=?$$

- a) $x+1$
b) $x-3$
c) $3x+1$
d) $3x-1$
e) $3x+3$

$x \neq 0 \rightarrow \frac{3}{-3} = -1$
a) 1 b) -3 c) 1 d) -1 e) 3

18. Which of the following is equivalent to $\frac{2x+4}{2x^2+8x+8}$ for all values of x for which both expressions are defined?

- a) $\frac{1}{2x^2+6}$
b) $\frac{1}{9x+2}$
c) $\frac{2}{x+6}$
d) $\frac{x+4}{1}$
e) $\frac{1}{x+2}$

$x \neq 0 \quad \frac{4}{8} = \frac{1}{2}$
~~a) $\frac{1}{6}$~~ b) $\frac{1}{2}$ ~~c) $\frac{1}{3}$~~ ~~d) $\frac{1}{4}$~~ e) $\frac{1}{2}$
 $x \neq 1 \quad \frac{6}{18} = \frac{1}{3}$
~~f) $\frac{1}{11}$~~ g) $\frac{1}{3}$

19. If $n > 4$, which of the following is equivalent to $\frac{n-4\sqrt{n}+4}{\sqrt{n}-2}$?

- ~~a)~~ \sqrt{n}
~~b)~~ $2\sqrt{n}$
~~c)~~ $\sqrt{n+2}$
d) $\sqrt{n-2}$
~~e)~~ $n+\sqrt{n}$

$= -2$

$n = 0 \rightarrow \frac{4}{-2} = -2$

$n = 9 \quad \frac{9 - 12 + 4}{3 - 2} = \frac{1}{1} = 1$

Here insert 30 because $LCM_3 = 5 \cdot 30$

21. If one tic equals 3 tacs and 2 tacs equals 5 tocs, what is the ratio of one tic to one toc?

- a) 15:2
- b) 2:15
- c) 6:5
- d) 5:6
- e) 1:15

$$\frac{\text{Tic}}{\text{Toc}} = \frac{30}{4} \quad \leftarrow \text{insert} \quad \frac{15}{2}$$

$$30 = 3(\text{tac})$$

$$10 = \text{tac}$$

$$20 = 5(\text{toc})$$

$$4 = \text{toc}$$

LCM \rightarrow 12

22. If $a = 2b$, $\frac{1}{2}b = c$, and $4c = 3d$, then what is the ratio of d to a ?

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

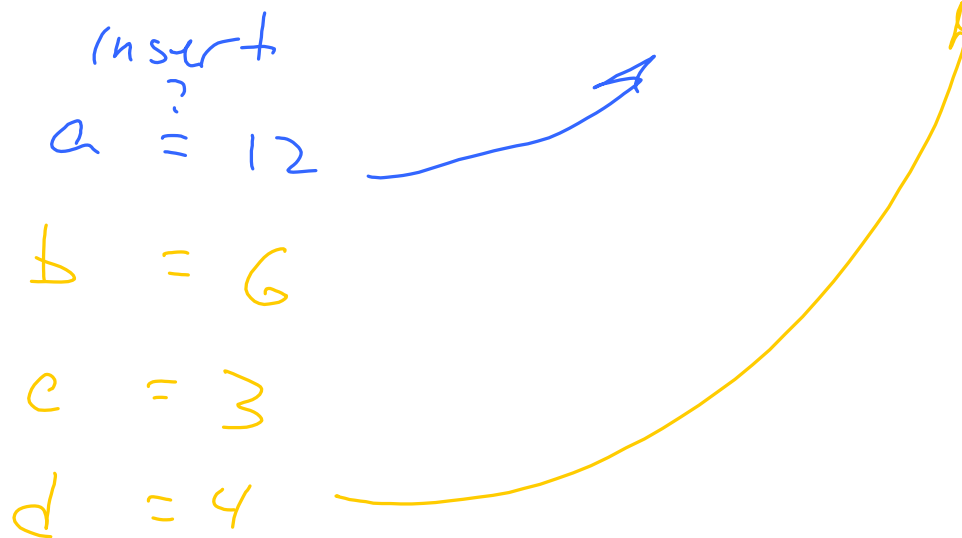
$$\frac{d}{a} = \frac{4}{12} = \frac{1}{3}$$

insert
?
 $a = 12$

$b = 6$

$c = 3$

$d = 4$



LCM of 3 & 5

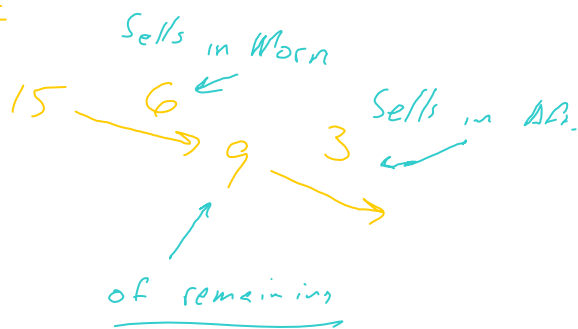
15

23. If a vender sells $\frac{2}{5}$ of his goods in the morning and $\frac{1}{3}$ of the remaining goods in the afternoon, what fraction of his goods did he sell in the morning and afternoon combined?

- a) $\frac{3}{8}$
- b) $\frac{2}{5}$
- c) $\frac{3}{5}$
- d) $\frac{2}{3}$
- e) $\frac{11}{15}$

$$\frac{m + a}{\text{goods}} = \frac{9}{15} = \frac{3}{5}$$

insert goods $\div 15$



24. If $\frac{1}{2}$ of the number of white mice in a certain laboratory is $\frac{1}{8}$ of the total number of mice, and $\frac{1}{3}$ of the number of gray mice is $\frac{1}{9}$ the total number of mice, then what is the ratio of white mice to gray mice in the laboratory?

- a) 16:27
b) 2:3
c) 3:4
d) 4:3
e) 3:2

$$T = ? \quad \leftarrow \text{insert}$$

$$\frac{W}{2} = 9$$

$$W = 18$$

$$\frac{G}{3} = 8$$

$$G = 24$$

$$W : G$$

$$18 : 24$$

$$3 : 4$$

25. Last year a certain store made a 10 percent profit on all sales. This year sales are 20 percent higher than last year, but the store's profits are only 5 percent of sales. This year's profits are what percent of last year's profits?

- a) 60%
- b) 80%
- c) 100%
- d) 120%
- e) 140%

Handwritten solution showing the calculation of this year's profits as a percentage of last year's profits. It uses a ratio of profits for this year and last year, with arrows indicating the relationship between the numbers and the final answer.

$$\frac{T_y P}{L_y P} = \frac{6}{10}$$

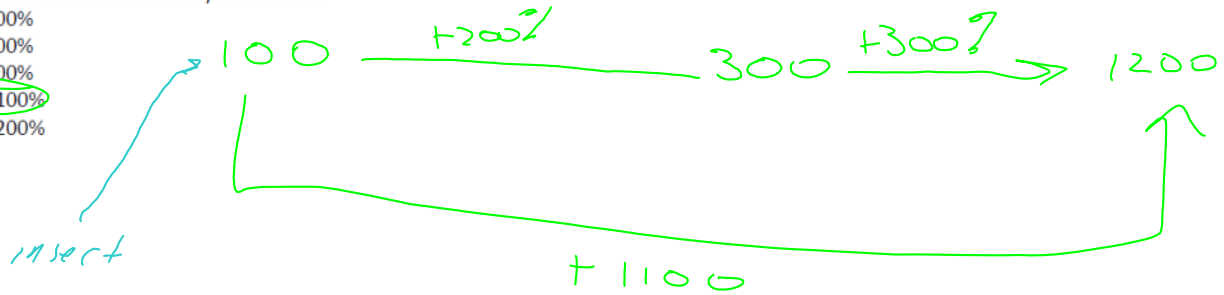
Arrows indicate the relationship between the numbers and the final answer:

- A green arrow points from the 6 in the numerator to the 120 in the final answer.
- A green arrow points from the 10 in the denominator to the 60 in the final answer.
- A green arrow points from the 100 in the calculation $5/10 = 100$ to the 60 in the final answer.
- An orange arrow points from the word "insert" to the 100 in the calculation.

Final answer: 60%

26. In the first half of the 20th century, the population of a particular country increased by 200 percent. In the second half of the century the population increased by 300 percent. What was the percent increase for the 20th century as a whole?

- a) 500%
- b) 600%
- c) 800%
- d) 1100%
- e) 1200%



$$\frac{d^2 w}{n}$$

27. If the time it takes a company to build a dam is determined by the formula $\frac{d^2 w}{n}$, where d is the depth of the dam in meters, w is the width in meters, and n is the number of employees involved, and the plans for a certain dam are changed so that the depth increases by 20 percent, the width decreases by 30 percent, and the number of employees increases by 40 percent, what will be the percent change in the time required to build the dam?

- a) -40%
b) -28%
c) +15%
d) +30%
e) +78%

Δ in time

$$d = 10 \rightarrow 12$$

$$w = 10 \rightarrow 7$$

$$n = 10 \rightarrow 14$$

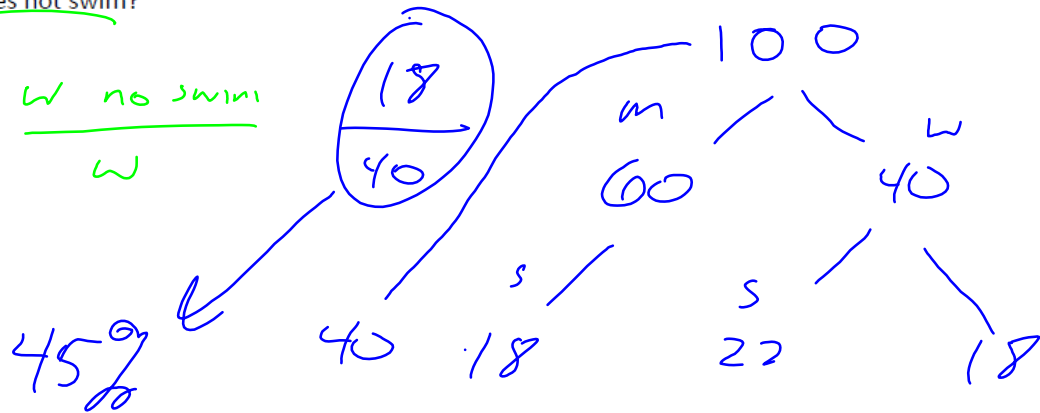
$$\frac{10^2 \cdot 10}{10} = 100$$

$$\frac{12^2 \cdot 7}{14} = 72$$

-28%

28. In a class of 350 students 60% are men, of whom 30% swim. If 40% of all the students swim, what % of the women does not swim?

- a) 18%
- b) 22%
- c) 30%
- d) 45%
- e) 55%



29. If Mike travels at a constant speed of x miles in y hours, how long will it take him to travel z miles?

a) $\frac{xy}{z}$ b) $\frac{zy}{x}$ c) $\frac{y}{xz}$ d) $\frac{x}{zy}$ e) $\frac{z}{xy}$

we want the time so the unit of time must be on Top

z must be on Top because the farther you go the longer it takes.

30. David can sail m miles in 13 hours. At that constant rate, how many hours will it take to sail n miles?

a) $\frac{mn}{13}$ b) $\frac{13}{mn}$ c) $\frac{13m}{n}$ d) $\frac{13n}{m}$ e) $\frac{m}{13n}$

Top farther we go longer takes

x must be on the bottom because the faster you go the less time it takes

31. If snow falls at a rate of x centimeters per minute, how many hours would it take for y centimeters to fall?

a) $\frac{x}{60y}$ b) $\frac{y}{60x}$ c) $\frac{60x}{y}$ d) $\frac{60y}{x}$ e) $60xy$

y is amt of snow fall the more that falls the longer it takes so y is on top.

x is rate the faster it snows the less time it takes so x is on bottom

STUPID EASY LAST STEP IS MIN TO HOURS

Since an answer in min is very large compared to an answer in hours

60 must go on bottom to make the answer smaller.

32. If n identical pipes can fill an x -gallon pool in t hours, then at the same rate how long will it take one such pipe to fill a y -gallon pool?

$\frac{ty}{xn}$ $\frac{nty}{x}$ $\frac{n}{xyt}$ $\frac{y}{xnt}$ $\frac{xy}{nt}$
 a) b) c) d) e)

33. If a publishing company prints books at a constant rate of b books in m minutes, how long will it take to print 10000 books with p amount of presses in hours? (no answer choices what goes on top of the fraction bar and what goes on the bottom)

$$\frac{10000 m}{p b \cdot 60}$$

T must be
on top to
get an answer
of hours.

n must go
on top because
in the question
you have one
pipe doing the
work of n
amt. of pipes

Algebra revisited with Back Solving.

34. Evaluate the following:

9506

97

- a) 95
- b) 96
- c) 97
- d) 98
- e) 99

$$95 \cdot 97 = \underline{\quad \quad \quad} \underline{5}$$

$$96 \cdot 97 = \underline{\quad \quad \quad} \underline{2}$$

we need
a 6

$$(3x + 9)(4x - 2) = \underline{\quad \quad \quad} \underline{-18}$$

$$\frac{3x(x-3)-x+3}{(x-3)}=?$$

ends with +3

$$\cancel{x} (x+1)(x-3) = \underline{\quad} \underline{\quad} \underline{-3}$$

35. If $x \neq 3$, then

- a) $x+1$
- b) $x-3$
- c) $3x+1$
- d) $3x-1$
- e) $3x+3$

$(x-3)$

+3

36. If $n > 4$, which of the following is equivalent to

$$\frac{n-4\sqrt{n+4}}{(\sqrt{n-2})}=?$$

- a) \sqrt{n}
- b) $2\sqrt{n}$
- c) $\sqrt{n+2}$
- d) $\sqrt{n-2}$
- e) $n+\sqrt{n}$

+4

37. If $y \neq -7$, then

$$\frac{y^3 + 5y^2 - 15y - 7}{y + 7} = ?$$

- a) $y^2 - 5y + 1$
- b) $(y^2 - 2y - 1)$
- c) $y^2 + 5y - 15$
- d) $(2y^2 - 3y - 1)$
- e) $2y^2 - 5y + 1$

In this case look how it
begins as well.

38. Four friends live together in an apartment and split the monthly rent equally. When one of the friends moves out, the remaining three split the rent equally and each pays \$50 per month more than before. How much is the total monthly rent for the apartment?

- a) \$240
- b) \$360
- c) \$480
- d) \$600
- e) \$800

Total Rent

~~\$60~~

600



$$\begin{array}{r} 4 \text{ split} \\ 90 \end{array} \quad \begin{array}{r} 30 \\ 120 \end{array}$$

$$\begin{array}{r} 150 \\ 50 \\ 200 \end{array}$$

39. A salesman is paid \$5.00 per hour for every hour he works in the office and \$8.00 for every hour he spends on the road. If he worked twice as many hours in the office as worked on the road, and he earned \$360 during a certain week, then how many hours did the salesman work in the office during the week?

- a) 20
b) 40
c) 50
d) 60
e) 70

Of : Rd
2 : 1

Of hrs

~~50~~ 40 \$5

~~\$250~~ 200

Rd hrs

~~25~~ 20 \$8

~~200~~
480
160
360

$$C : T$$

$$3 : 1$$

40. A car dealer had a sale in order to sell off excess stock. Before the sale, the dealer had three times as many cars as he had trucks. During the sale, he sold 100 cars and 25 trucks. If after the sale the dealer has twice as many cars as trucks, then how many cars did the dealer have prior to the sale?

- a) 60
b) 90
c) 120
d) 150
e) 180

Cars Prior

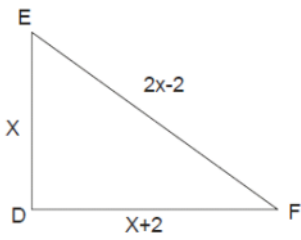
$$\begin{array}{r} \cancel{90} \quad 150 \\ - 100 \quad - 100 \\ \hline 50 \end{array}$$

Truck

$$\begin{array}{r} \cancel{30} \quad 50 \\ - 25 \\ \hline 25 \end{array}$$

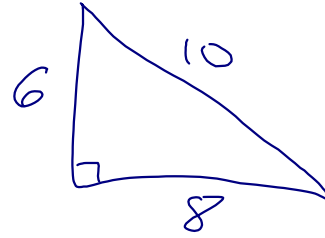
$$2 : 1$$

41. In the right triangle DEF below, what is the value of x?



- a) 6
- b) 8
- c) $6\sqrt{2}$
- d) 10
- e) 13

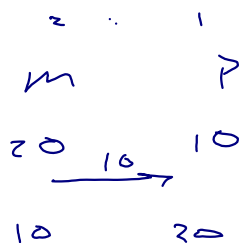
$$x = 6$$



$$a^2 + b^2 = c^2$$
$$36 + 64 = 100$$

42. Philip has twice as many salamanders as Matt. If Philip gives Matt 10 of his salamanders, he will have half as many as Matt. How many salamanders do Philip and Matt have together?

- a) 10
b) 20
c) 30
d) 40
e) 60



$$m + p = ?$$

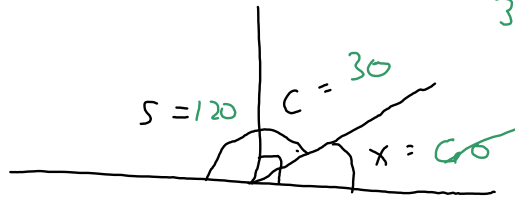
~~20~~ not mult of 3

30

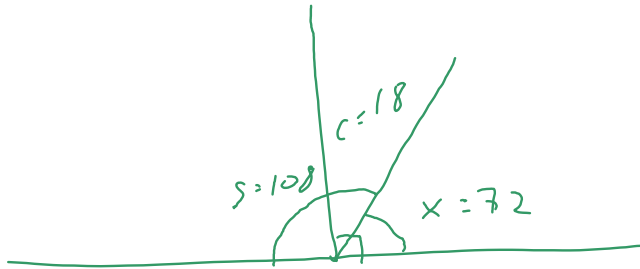
P	:	m	Total
2	:	1	3

43. An angle of x degrees has the property that its complement is equal to $\frac{1}{6}$ of its supplement where x is?

- a) 30 degrees
- b) 45 degrees
- ~~c) 60 degrees~~
- d) 63 degrees
- e) 72 degrees



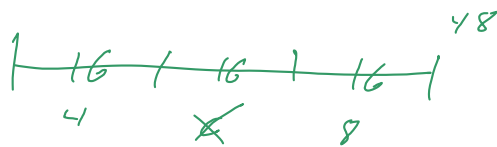
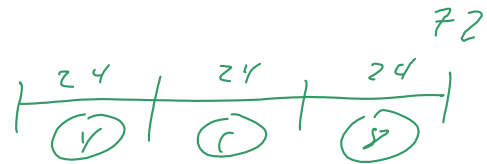
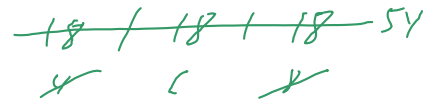
$$30 \neq \frac{1}{6} 120 \quad \text{No}$$



$$18 = \frac{1}{6} 108 \quad \text{Yes}$$

44. A wire is cut into three equal parts. The resulting segments are then cut into 4, 6 and 8 equal parts respectively. If each of the resulting segments has an integer length, what is the minimum length of the wire?

- a) 24
b) 36
c) 48
d) 54
e) 72



45. A store has a parking lot that contains 70 parking spaces. Each row in the parking lot contains the same number of parking spaces. The store has bought additional property in order to build an addition to the store. When the addition is built, 2 parking spaces will be lost from each row; however 4 more rows will be added to the parking lot. After the addition is built the parking lot will still have 70 parking spaces, and each row will contain the same number of parking spaces as every other row. How many rows were in the parking lot before the addition was built?

- a) 5
b) 6
c) 7
d) 10
e) 14

Rows bef

~~7~~ 10

↓

11 14

Spaces in each row

10 7

↓

8 5

70

~~88~~ 70

$$D = S \cdot T$$

46. It takes an hour more by train to cover a distance of 360 miles when the usual speed of the train is decreased by 4 mph. What is the usual speed of the train?

- a) 60
- b) 55
- c) 50
- d) 45
- e) 40

Speed

~~60~~

40

D	S	T
360	60 -4	6
Not!	56	7
360	40	9
✓	36	10

47. A certain used-book dealer sells paperback books at 3 times dealer's cost and hardback books at 4 times dealer's cost. Last week the dealer sold a total of 120 books, each of which had cost the dealer \$1. If the gross profit (sales revenue minus dealer's cost) on the sale of all of these books was \$300, how many of the books sold were paperbacks?

- a) 40
- b) 60
c) 75
d) 90
e) 100

$$\begin{array}{c} \text{PB} \\ \hline \end{array} + \begin{array}{c} \text{H/B} \\ \hline \end{array} = 120$$

60 + 60 = 120

Cost: 60 \$ 60 \$

SP: 180 240

P: 120 180

300 ✓

48. A merchant paid \$300 for a shipment of x identical calculators. The merchant used 2 of the calculators as demonstrators and sold each of the others for \$5 more than the average (arithmetic mean) cost of the x calculators. If the total revenue from the sale of the calculators was \$120 more than the cost of the shipment, how many calculators were in the shipment?

a) 24

b) 25

c) 26

d) 28

e) 30

Handwritten work for option e) 30:

calc
~~25~~
 2
 (12+5)
 $23 \cdot 17 = 391$
 \$300
 \$12 each
 91

Handwritten work for option d) 28:

calc
 30
 2
 (10+5)
 $28 \cdot 15 = 420$
 \$300
 \$10 each
 120

49. A car traveled 462 miles per tank full of gasoline on the highway and 336 miles per tank full of gasoline in the city. If the car traveled 6 fewer miles per gallon in the city than on the highway, how many miles per gallon did the car travel in the city?

- a) 14
b) 16
c) 21
d) 22
e) 27

$$\frac{\text{gal city}}{16}$$

$$\frac{336}{16} = 21$$
$$\frac{462}{22} = 21$$

same amt
gallons in
Tank

so

16 works

50. A total of \$ 30,000 invested in two investments yields 4.5% and 6% simple interest. If the total interest at the end of the year was \$ 1,470, how much was invested at the higher rate?

- a) \$ 8,000
b) ~~\$ 14,000~~
c) \$ 17,500
d) \$ 22,000
e) \$ 25,650

Invested	HR	LR
<u>(14 000)</u>		16 000
6%		4.5%
↓		↓
840		720
1560 too big!		

Factor slide

$$16000 \cdot 4\frac{1}{2}\%$$

$$2 \cdot 8000 \cdot 4\frac{1}{2}\%$$

$$8000 \cdot 9\%$$

720