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ma	igic squ	Jare					

8 <i>a</i>	$3 + 24 \div 8 - 1$	30
3 <i>a</i>	5 <i>a</i>	7 <i>a</i>
$5(6\div 3\cdot 2)$	9 <i>a</i>	$\frac{4+4\cdot 4}{8\div 2-2}$

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## # 2 At the grocery store, a new promotion rewards every 15<sup>th</sup> customers with a free coupon and every 25<sup>th</sup> customer with a surprise gift. Which customer will be the first to obtain both?

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### # 3 During the last 4 games of his last hockey season, Taylor had 8 minutes, 5 minutes, 10 minutes and 12 minutes in penalties. If he averages 4 minutes of penalties over the 30 games season, how many total penalty minutes did Taylor have last season?

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# 4 In  $\triangle ABC$ ,  $\overline{BC} \cong \overline{AC}$ ,  $m \angle B = 3x + 2$ and  $m \angle C = 3x - 4$ , find  $m \angle A$ . # 4 In  $\triangle ABC$ ,  $\overline{BC} \cong \overline{AC}$ ,  $m \angle B = 3x + 2$ and  $m \angle C = 3x - 4$ , find  $m \angle A$ .

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### # 5 At Chips R Us, the ratio of small bags of plain chips to salt and vinegar to barbeque is 3:4:5. If the store usually sells 7200 bags of plain chips in a week, how many bags of barbeque do they usually sell?

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# 6 If a rhombus has an angle of  $120^{\circ}$  , find the ratio of the longer diagonal to the shorter diagonal.

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# 7 If the point $(x, 4)$	lies on the graph of
the line $4x - 5y = 12$ ,	find <i>x</i> .

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ANSWER:

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# # 8 The length of a rectangle exceeds the width by 2. If the perimeter is greater than 68, what are the smallest possible integral dimensions of the rectangle?

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ANSWER:	ANSWER:

# 9 Hurricane Camille completely destroyed 5579 homes. An additional 12491 homes had major damage and 25090 homes had minor damage. What percent of damaged homes were totally destroyed? # 9 Hurricane Camille completely destroyed 5579 homes. An additional 12491 homes had major damage and 25090 homes had minor damage. What percent of damaged homes were totally destroyed?

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# 10 Find the exact area of a circle inscribed in a square of side 12 cm.

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CODE: ANSWER:

# 11 Given 
$$\begin{bmatrix} a & d \\ 7 & -5 \\ -4 & c-d \end{bmatrix} = \begin{bmatrix} 6 & 3 \\ 7 & b \\ -4 & a+b \end{bmatrix}$$
. # 11 Given  $\begin{bmatrix} a & d \\ 7 & -5 \\ -4 & c-d \end{bmatrix} = \begin{bmatrix} 6 & 3 \\ 7 & b \\ -4 & a+b \end{bmatrix}$ .  
Find c. Find c.

CODE:	CODE:
ANSWER:	ANSWER:



CODE:	CODE:
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# 12  $\overline{EH}$  is divided by F and G in the ratio 5:3:2 from left to right. If EH = 30, find FG.

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CODE: ANSWER:

# 13  $\triangle FJH$  is isosceles with base  $\overline{JH}$ . *K* and *G* are midpoints. FK = 2x + 3, GH = 5x - 9, and JH = 4x. Find the perimeter of  $\triangle FJH$ .

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CODE:

ANSWER:

# 14 Write the equation of the line in slope/intercept form.



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CODE:	CODE:	
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# 14 Write the equation of the line in slope/intercept form.



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# 15 Simplify into a single fraction:	# 15 Simplify into a single fraction:
$\frac{\frac{2}{3} - \frac{5}{4}}{\frac{5}{4} + \frac{2}{3}}$	$\frac{\frac{2}{3} - \frac{5}{4}}{\frac{5}{4} + \frac{2}{3}}$

CODE:	CODE:
ANSWER:	ANSWER:

# 1	5	Simplify	into	а	single	fraction:
-----	---	----------	------	---	--------	-----------

2	5	2	5
3	4	3	4
5	<u>2</u>	5	2
4	3	4	3

# 15 Simplify into a single fraction:

CODE:	CODE:	
ANSWER:	ANSWER:	

# 16 Find the sum of the first three prime numbers greater than 125.

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CODE:	CODE:	
ANSWER:	ANSWER:	

# 17  

$$m \angle DAC = 6x + 5, m \angle BAC = 10x + 13,$$
  
 $m \angle B = 102^{\circ}; AD \text{ bisects } \angle BAC.$   
Find  $m \angle C.$   
A B B





# 18 Subtract:		# 18 Subtract:	
15a	4 <i>a</i> – 5	15a	4a - 5
$\overline{3a+9}$	$\overline{a+3}$	$\frac{1}{3a+9}$	<i>a</i> +3

CODE:	CODE:
ANSWER:	ANSWER:

# 18 Subtract:		# 18 Subtract:	
15a	4a - 5	15 <i>a</i>	4a - 5
$\overline{3a+9}$	$-\overline{a+3}$	$\overline{3a+9}$	$\overline{a+3}$

CODE:	CODE:
ANSWER:	ANSWER:

# # 19 Give an approximation of the circumference of a circle with area $\frac{169\pi}{5}$ sq.in.

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# 20 The sum of the measures of the interior angles of a polygon is between 5800 and 6000. How many sides does the polygon have? # 20 The sum of the measures of the interior angles of a polygon is between 5800 and 6000. How many sides does the polygon have?

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ANSWER:

# 21 If 
$$a*b = \frac{a+b}{2}$$
, what is  $(6*8)*9$ ?

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ANSWER:	ANSWER:

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, what is  $(6*8)*9$ ?

# 21 If  $a*b = \frac{a+b}{2}$ , what is (6\*8)\*9?

CODE:	CODE:
ANSWER:	ANSWER:

# # 22 Solve for x: $(x+1)(x-6) - x^2 < x+18$

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CODE: ANSWER:

# # 23 13 is 20% of what ?

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ANSWER:	ANSWER:

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CODE: ANSWER:

# 24 If the length of a rectangle is 80 and the length of a diagonal is 100, what is the measure of the width? # 24 If the length of a rectangle is 80 and the length of a diagonal is 100, what is the measure of the width?

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# # 25 Express the average of the following numbers as a single fraction:

$$\frac{2}{5}, \frac{5}{6}, \frac{3}{10}, \frac{5}{12}$$

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$$\frac{2}{5}, \frac{5}{6}, \frac{3}{10}, \frac{5}{12}$$

CODE:	CODE:	
ANSWER:	ANSWER:	

# 25 Express the average of the following numbers as a single fraction:

 $\frac{2}{5}, \frac{5}{6}, \frac{3}{10}, \frac{5}{12}$ 

# 25 Express the average of the following numbers as a single fraction:

2	5	3	5
5'	6'	10'	12

CODE: ANSWER:

CODE:

ANSWER: