

Armada High School

HONORS GEOMETRY SUMMER HOMEWORK

The vocabulary and exercises in this review packet are designed to help you review topics from previous math courses that will help you succeed in this course. This packet will be graded and this grade will become your first grade for Honors Geometry. To receive credit, you must show your work for each exercise. Someone may help you with this packet, if needed, but you have to write out all the solutions and remember the processes and vocabulary. Assessments in September will further check your understanding of the topics contained in this review packet.

Four points will be earned by all students who return this completed review packet on the first day of school. Beginning the third day of school, one point per day will be deducted from the grade earned. Beginning the sixth day of school, this assignment will no longer be accepted and the grade will be zero.

Here are some websites you may find useful if you need help:

<http://www.math.com/>

<http://www.freemathhelp.com/algebra-help.html>

<http://mathforum.org/library/drmath/drmath.high.html>

<http://www.mathtv.com>

<http://www.schooltube.com>

<http://www.purplemath.com>

1)	2)	3)	4)
5)	6)	7)	8)
9)	10)	11)	12)
13)	14)	15)	16)
17)	18)	19)	20)
21)	22)	23)	24)
25)	26)	27)	28)
29)	30)	31)	32)
33)			
34)			
35)			
36)			
37)			

1) Add: $(2x + 5y) + (3x - 2y)$

A) $4x + 7y$

B) $5x + 3y$

C) $3x + 4y$

D) $5x + 5y$

Please show all work here:

2) Add: $(3x^3 + 3x^2 - 4x + 5) + (x^3 - 2x^2 + x - 4)$

A) $2x^3 + 5x^2 - 5x + 9$

B) $4x^3 + 5x^2 - 3x - 1$

C) $4x^3 + 1x^2 - 3x + 1$

D) $3x^3 + 1x^2 - 2x + 9$

Please show all work here:

3) Subtract: $(x^3 + 3x^2 + 5x - 4) - (3x^3 - 8x^2 - 5x + 6)$

A) $-2x^3 + 11x^2 + 10x - 10$ B) $-4x^3 + 8x^2 + 10x + 10$ C) $2x^3 + 5x^2 - 10x - 10$ D) $-2x^3 + 11x^2 + 10x + 2$

Please show all work here:

4) Multiply: $(x + 3)(x + 2)$

- A) $3x^2 + 2x + 5$ B) $2x^2 + 2x + 6$ C) $x^2 + 2x + 5$ D) $x^2 + 5x + 6$

Please show all work here:

5) Reduce to lowest terms: $\frac{252}{420}$

- A) $\frac{126}{210}$ B) $\frac{2}{5}$ C) $\frac{3}{5}$ D) $\frac{36}{60}$

Please show all work here:

7)

Subtract: $\frac{4}{7} - \frac{2}{5} =$

A) $\frac{2}{2}$

B) $\frac{2}{7}$

C) $\frac{2}{35}$

D) $\frac{6}{35}$

Please show all work here:

6)

Add: $\frac{1}{3} + \frac{1}{2} =$

A) $\frac{5}{6}$

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

C) $\frac{2}{6}$

D) $\frac{1}{5}$

Please show all work here:

8) Find the GCF of 27, 90, and 84.

A) 2

B) 3

C) 6

D) 9

Please show all work here:

9) Factor out the GCF $12x^2y^3z^4 - 2x^3yz^2$

A) $2x^3y^3z^2(6xyz - 1)$

B) $2x^2yz^2(6y^2z^2 - x)$

C) $x^3yz(12y^2z^3 - 2xyz)$

D) $12x^2yz^3(y^2z^2 - 6xz)$

Please show all work here:

- 10) Factor out the GCF

$$2xy^2 + 6xy^3$$

- A) $2xy^2(1 + 3y)$ B) $2xy^3(1 + 3xy)$ C) $6xy^3(3 + xy)$ D) $6xy^2(2 + xy)$

Please show all work here:

- 11) Factor the trinomial

$$x^2 + 3x - 18$$

- A) $(x + 3)(x - 18)$ B) $(x - 3)(x - 6)$ C) $(x + 3)(x - 6)$ D) $(x - 3)(x + 6)$

Please show all work here:

- 12) Factor the trinomial

$$x^2 - 9x + 20$$

- A) $(x - 9)(x + 20)$ B) $(x - 5)(x + 4)$ C) $(x - 5)(x - 4)$ D) $(x - 2)(x + 10)$

Please show all work here:

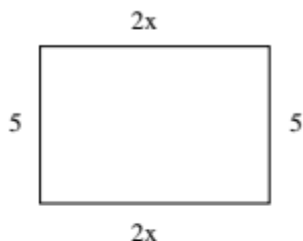
- 13) Factor the trinomial

$$2x^2 + 5x - 12$$

- A) $(2x - 6)(x + 2)$ B) $(2x - 5)(x + 12)$ C) $(2x - 3)(x + 4)$ D) $(x - 4)(2x + 3)$

Please show all work here:

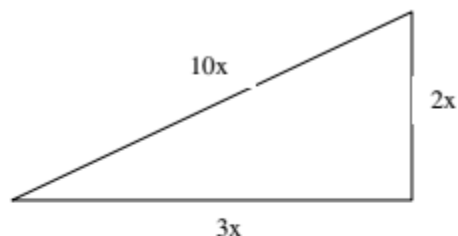
- 14) Find the perimeter of the rectangle. Leave your answer in terms of x .



- A) $10x$ B) $2x + 5$ C) $100x$ D) $4x + 10$

Please show all work here:

- 15) The triangle has a perimeter of 60. Find the value of x , and the measure of each side.



- A) $x = 5$; 10, 15, 150 B) $x = 4$; 8, 12, 40 C) $x = 3$; 6, 9, 30 D) $x = 6$; 12, 18, 60

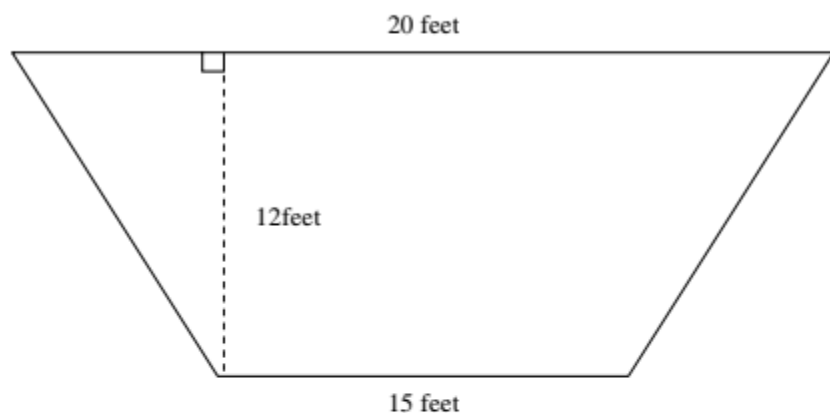
Please show all work here:

- 16) Your bedroom is 10 ft by 12 ft and you want to carpet the entire room. It costs \$2.49 per square foot for carpet at Lowe's. What is the square footage of the room, and how much will it cost to carpet the room? Draw a picture below and show your work.

- A) 120 *sq. ft* ; \$298.80 B) 22 *sq. ft* ; \$54.78 C) 44 *sq. ft* ; \$109.56 D) 240 *sq. ft* ; \$597.60

Please show all work here:

- 17) You make a garden in front of your house in the shape of a trapezoid. The trapezoid is as shown below. You want to prevent weeds from growing so you buy weed block. How many square feet of weed block will you need?



- A) 420 sq. ft B) 47 sq. ft C) 3600 sq. ft D) 210 sq. ft

Please show all work here:

- 18) Simplify the power expression

$$2k^2 \cdot k^2$$

- A) $6k^3$ B) $9k^4$ C) $2k^4$ D) $6k^4$

Please show all work here:

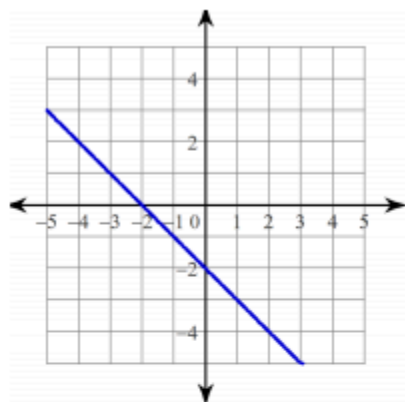
- 19) Simplify the power expression

$$2x^3 \cdot x^2 \cdot 3x^2$$

- A) $4x^3$ B) $6x^7$ C) $6x^4$ D) $2k^4$

Please show all work here:

- 20) Write the Slope - Intercept form of the equation for this line

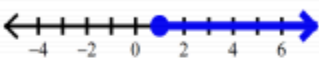


- A) $y = -4x - 1$ B) $y = -2x - 1$ C) $y = -x - 2$ D) $y = x - 2$

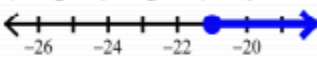
Please show all work here:

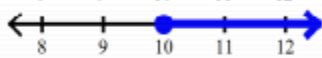
21) Solve the inequality and graph its solution

$$5(-1 + m) \geq 45$$

A) $m \geq 1$: 

B) $m \geq 10$: 

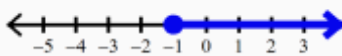
C) $m \geq -21$: 

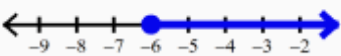
D) $m \geq 10$: 

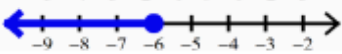
Please show all work here:

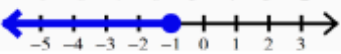
22) Solve the inequality and graph its solution

$$2n - 5 \leq -7$$

A) $n \geq -1$: 

B) $n \geq -6$: 

C) $n \leq -6$: 

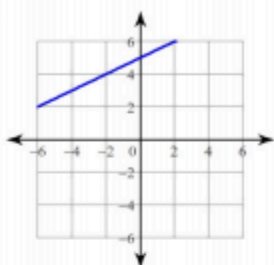
D) $n \leq -1$: 

Please show all work here:

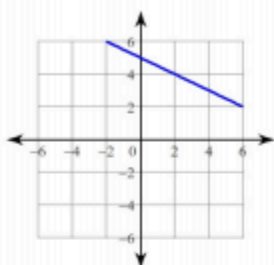
23) Sketch a graph of this line

$$y = -\frac{1}{2}x + 5$$

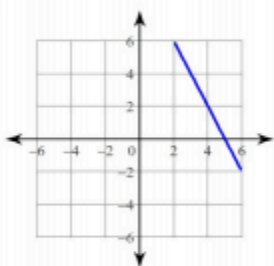
A)



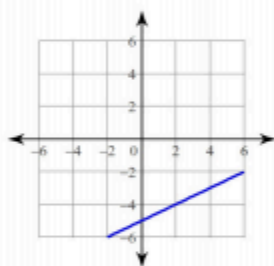
B)



C)



D)

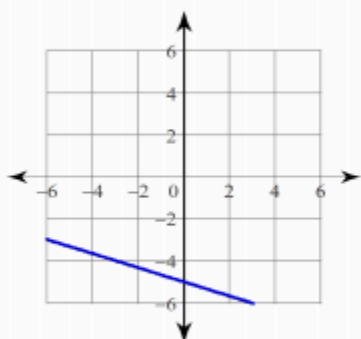


Please show all work here:

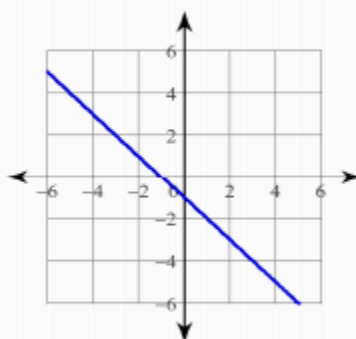
24) Sketch a graph of the line

$$x - 3y = 15$$

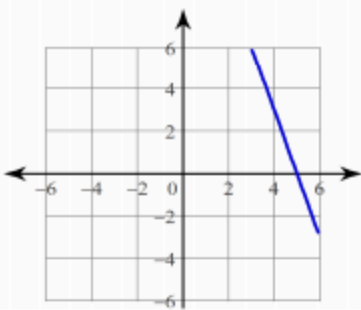
A)



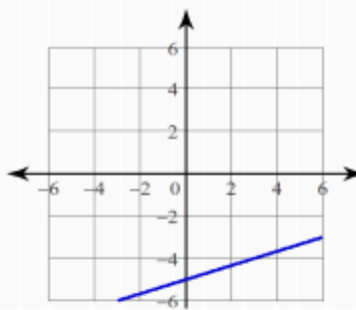
B)



C)



D)

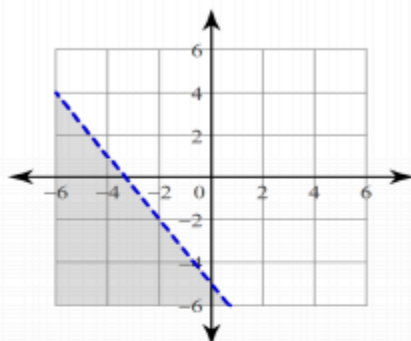


Please show all work here:

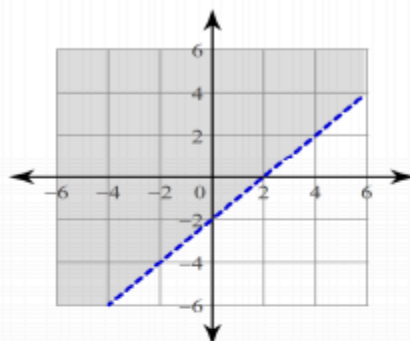
25) Sketch of graph of the linear inequality

$$y > x - 2$$

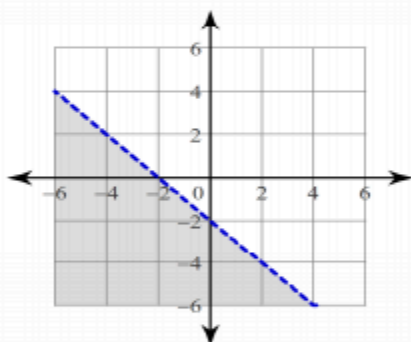
A)



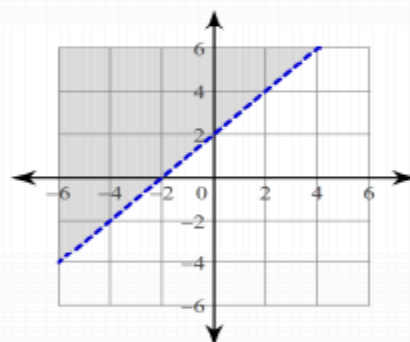
B)



C)



D)



Please show all work here:

26) Solve the equation $\frac{2}{3}x + 5 = 13$

A) 6

B) 8

C) 12

D) 27

Please show all work here:

27) Solve the equation $4x - 13 = 22 - 3x$

A) $\frac{7}{9}$

B) $\frac{9}{7}$

C) 5

D) 9

Please show all work here:

28) Solve the equation $\frac{1}{3}(27x + 18) = 12 + 6(x - 4)$

A) -6

B) -3

C) -2

D) 2

Please show all work here:

29) Solve the equation $6(2 - x) + 4x = -5(x + 3)$

A) $-\frac{9}{5}$

B) $-\frac{7}{3}$

C) $-\frac{27}{7}$

D) -9

Please show all work here:

30) What is the value of: $\frac{10^2 + 8 \cdot 7}{3(14 \div 2 - 15)}$

A) $\frac{52}{23}$

B) 4

C) $\frac{187}{39}$

D) $\frac{826}{39}$

Please show all work here:

31) Find the slope of the line passing through (-3, -6) and (7, -2)

A) -2

B) 1

C) $\frac{4}{5}$

D) $\frac{2}{5}$

Please show all work here:

32) What is the distance between (-6, -2) and (2, 4)

A) $2\sqrt{5}$

B) $2\sqrt{7}$

C) 10

D) 28

Please show all work here:

33) Write out the formula for the area of a rectangle 10 times.

34) Write out the formula for the area of a triangle 10 times.

35) Write out the formula for the area of a circle 10 times.

36) Write out the formula for the circumference of a circle 10 times.

37) Write out the formula for the area of a trapezoid 10 times.