Geometry Unit 1: Expressions and Formulas
HOMEFUN ANSWERS

1) $15 + ((11 + 2) + 3^2)$

37

2) $((10 - 5) + (12 \div 4)^2)$

14

3) $((3 + 3)^2 + 5) - 2^2$

37

4) $(6^2 + (14 \div 7 + 5^2))$

63

5) $12 + ((10 - 6) \times 5^2)$

112

6) $(6^2 + (20 \div 5 + 4^2))$

56

7) $((10 + 4) + (14 \div 7)^2)$

18

8) $((11 - 3)^2 + 7) - 2^2$

67

9) $2 + (10 \times (11 - 2)^2)$

812

10) $5 + (7 + (3 + 2)^2)$

37

11) $\sqrt{196} + 5^3 - 90 \div 10$ Explain in order the steps

Square Root
Exponent
Divide
Add
Subtract

12) Which of the following has a value of 40.

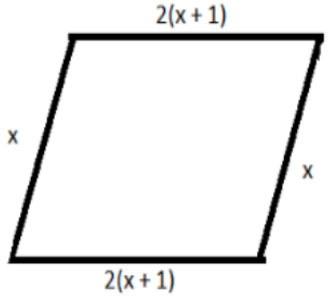
a) (9-1)5 b) 8(4) + 5

c) $20^2/10$ d) 14 – 6 + 12

(1) $3x + 2(5x - 7)$ 13x-14		S	$20x - 3$	Y	$20x - 18$
(2) $9 - 3(2x - 4)$ -6x+21		E	$13x - 14$	N	$5x + 11$
(3) $8x - 6(3 - 2x)$ 20x-18		T	$5x + 15$	H	$-6x + 21$
(4) $-5 + 5(x + 4)$ -6x+15					
(5) $4(6n + 9) - 10n$ 14n+36		O	$14n + 36$	S	$19n + 36$
(6) $14 - 3(4n - 1)$ -12n+17		E	$-12n + 13$	N	$-12n + 17$
(7) $-8n - 8(-4 - 2n)$ 8n+32		W	$8n + 32$	T	$8n - 1$
(8) $7k - 2(3k + 1) - 9$ k-11		L	$2k + 7$	C	$-13k + 34$
(9) $-6 + 5(8 - k) - 8k$ -13k+34		A	$-7k + 37$	I	$-7k + 30$
(10) $k + 1 - 4(2k - 9)$ -7k+37		K	$2k - 4$	L	$k - 11$
(11) $-10k - 3 + 2(5 + 6k)$ 2k+7					
(12) $8 + 9x + 4(11 - 2x)$ x+52		A	$14x + 30$	R	$6x + 52$
(13) $-4(-2x - 7) + 6x - 7$ 14x+21		H	$3x + 21$	M	$x + 52$
(14) $9 - 3(-4 + 3x) + 12x$ 3x+21		T	$3x + 6$	I	$14x + 21$
(15) $5(2y - 4) + 2(y + 9)$ 12y-2		A	$12y - 4$	X	$12y - 2$
(16) $-4(3u - 1) + 7(3 - 2u)$ -26u+25		W	$-42u + 9$	Y	$-42u + 42$
(17) $6(-5u + 1) - 3(4u - 12)$ -42u+42		S	$13u - 12$	D	$-5u + 25$
(18) $3(-u - 5) + 8(2u + 1)$ 13u-7		R	$13u - 7$	A	$-26u + 25$

T	H	E	Y		N	O	W		C	A	L	L		H	I	M		X	R	A	Y

19. Find the perimeter of the following parallelogram.



6x + 4

What Is It Like to Live Under a Carpet?

Evaluate each formula below for the given values of the variables. Find each answer at the bottom of the page and cross out the letters above it. When you finish, the answer to the title question will remain.

(1) $d = rt$	where d is the distance traveled by an object moving at speed r in time t. Find d if $r = 52$ m/sec, $t = 8$ sec.	52·8 → 416 m
(2) $V = \ell wh$	where V is the volume of a rectangular solid with length ℓ, width w, and height h. Find V if $\ell = 12$ cm, $w = 5$ cm, $h = 3.5$ cm.	12·5·3.5 → 210 cm^3
(3) $P = 2\ell + 2w$	where P is the perimeter of a rectangle with length ℓ and width w. Find P if $\ell = 16$ km, $w = 7.5$ km.	2(16) + 2(7.5) → 32 + 15 → 47 km
(4) $d = \frac{1}{2}n(n-3)$	where d is the number of diagonals of a polygon with n sides. Find d if $n = 20$.	$\frac{1}{2}$·20·(20−3) → $\frac{1}{2}$·20·17 → 170 diagonals
(5) $V = P(1 + rt)$	where V is the value of an investment of P dollars, invested at simple interest rate r for time t. Find V if $P = \$500$, $r = .08$ per year, $t = 3$ years.	500(1+.08·3) → \$ 620
(6) $s = 4.9t^2$	where s is the distance in meters a free-falling object travels in t seconds. Find s if $t = 4$ sec.	$4.9 \cdot 4^2$ → 4.9·16 → 78.4 m
(7) $P = I^2R$	where P is the power in an electrical circuit with current I and resistance R. Find P if $I = 12$ amperes, $R = 2$ ohms	$12^2(2)$ → 144(2) → 288 watts
(8) $A = 2w^2 + 4hw$	where A is the surface area of a square prism with a square base of side w and with height h. Find A if $w = 7$ cm, $h = 10$ cm	$2(7^2) + 4(10)(7)$ → 2(49) + 280 → 98 + 280 → 378 cm^2

9. Choose the correct solution given $(b-2)^2 + a^2$ with a = 6, b = 7

a) 22 c) 37
b) 44 d) 61

10. Create an expression that's answer is 2x + 10y using combining like terms and or distributive property.
(for example: x+ 12y- 2y + x)

Day 4 Distance

Find the distance between each pair of points. **All answers should be in simplified radical form!!**

1) (1,2) (3,4)

$2\sqrt{2}$

2) (-6,0) (-2,0)

4

3) (5,6) (-3,1)

$\sqrt{89}$

4) (-6,-4) (6,-8)

$4\sqrt{10}$

5) (-3,-2) (3,1)

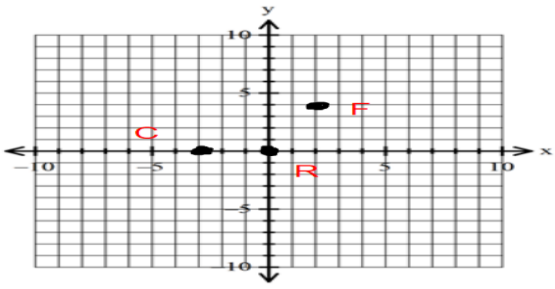
$3\sqrt{5}$

6) Snoop and Dr. Dre are going to hike from Cedar Creek Cave to the Ford Nature Center. Cedar Creek Cave is located 3 miles west of the ranger's station. The Ford Nature Center is located 2 Miles east and 4 Miles north of the ranger's station.

Draw a diagram to represent the situation! Use the Graph

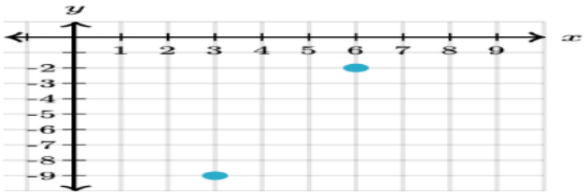
What is the distance between Cedar Creek Cave and Ford Nature Center? (Hint you will need to use the distance formula and the appropriate points on your graph)

$\sqrt{41}$



7) CROSS OUT SORRY ☹

8) What is the distance between the following points?



Choose 1 answer:

(A) 9

(B) 10

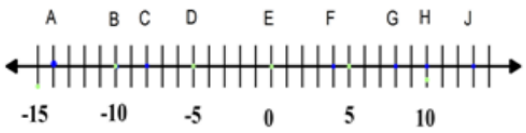
(C) $\sqrt{21}$

(D) $\sqrt{58}$

Day 5 Midpoint

Refer to the number line below to find the midpoint to each segment.

1) *AB* **2)** *CE* **3)** *FA*



1. -12
2. -4
3. -5

4) Find the midpoint of the line segment with these endpoints (4, 6) and (9,3).

A) (-2.5, 1.5) C) (6.5, 4.5)

B) (14, 0) D) (5, 6)

Refer to the coordinate plane below to find the midpoint to each segment.

5) $\left(-3, -\frac{7}{2}\right)$

7) $\left(-\frac{3}{2}, -\frac{13}{2}\right)$

6) AD $\left(\frac{3}{2}, \frac{1}{2}\right)$

7) EB $\left(\frac{7}{2}, 4\right)$