

No Calculator

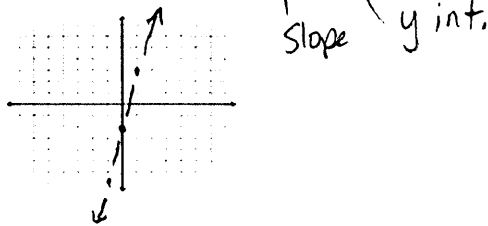
Find videos on each [skill] at [www.AlgebraNinja.com](http://www.AlgebraNinja.com) Name: KEY Hour: \_\_\_\_\_

Basic 20 ACT Prep Version 5

1. Solve  $\frac{12x}{12} = \frac{7}{12}$  [26]

$x = \frac{7}{12}$

2. Graph the equation  $y = 5x - 2$  [196]



3. Write and solve an equation for the sentence: five less than three times a number is equivalent to 17. [219]

$3n - 5 = 17$   
 $+5 \quad +5$   
 $3n = 22$   
 $n = \frac{22}{3}$

4. Find the slope given points (-9,4) & (4,5) [193]

$\frac{5-4}{4-(-9)} = \frac{1}{13}$

5. Simplify  $\frac{6}{5} \cdot \frac{10}{3}$  [42]

$\frac{3 \cdot 2}{5} \cdot \frac{5 \cdot 2}{3} = 4$

6. Distribute  $-8(x-2)$  [8]

$-8x + 16$

7. Simplify (PEMDAS)  $4 + 2(1+2)^2 - 6$  [212]

$4 + 2(3)^2 - 6$   
 $4 + 2 \cdot 9 - 6$   
 $4 + 18 - 6$   
 $22 - 6$

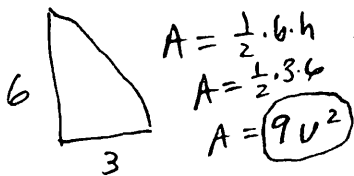
8. Simplify  $-4 + 8$  [5]

$4$

9. Solve  $7\frac{1}{7}a = 11\frac{7}{8}$  [78]

$a = 77$

10. Find the area of a triangle that has a base = 3 and height = 6 [147]



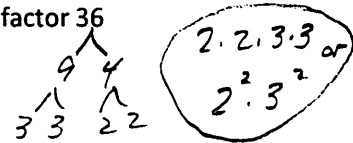
11. If  $f(x) = 7x - 1$ , evaluate at  $x = -2$  [110]

$7(-2) - 1$   
 $-14 - 1 = -15$

12. Simplify  $3m^4mymmy^3m2y$  [206]

$3 \cdot 4 \cdot 2 \cdot m \cdot m \cdot m \cdot m \cdot y \cdot y \cdot y \cdot y^3 = 24m^5y^5$

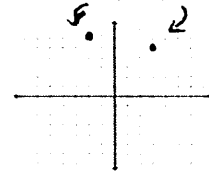
13. Use Prime factorization to factor 36 [252]



14. Simplify  $\frac{1}{2} \cdot \frac{8}{5}$  [50]

$\frac{1}{2} \cdot \frac{8}{5} = \frac{1}{2} \cdot \frac{4 \cdot 2}{5} = \frac{4}{5}$

15. Graph the points (-2,6) & (3,5) [251]



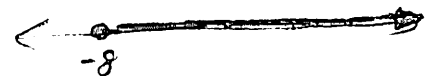
16. Find 3 points on  $f(x) = 2x - 5$  [185]

X	Y
0	-5
1	-3
2	-1
-1	-7

17. Solve  $x + 3x + 8 = 17$  [253]

$4x + 8 = 17$   
 $4x = 9$   
 $x = \frac{9}{4}$

18. Graph on a number line: "x is greater than or equal to -8." [224]



19. Simplify  $\frac{3}{8} + \frac{1}{3}$  [39]

$\frac{3 \cdot 3}{8 \cdot 3} + \frac{1 \cdot 8}{3 \cdot 8} = \frac{9}{24} + \frac{8}{24} = \frac{17}{24}$

20. simplify  $-7 - |-4|$  [21]

$-7 - 4 = -11$