

Name: Key

Class: _____

Date: _____

ID: A

2020 Journal Problems

Short Answer

#1

1. 8b $3(8) = \frac{2}{3}(4x-5)$

$54 = 2(4x-5)$
 $54 = 8x - 10$
 $64 = 8x$
 $8 = x$

#2 $20(3x) + 20(2x) = (2x)20$
 $\frac{60x}{4} + \frac{40x}{5} = 4x$
 $15x + 8x = 230$
 $x = 10$

2. 8b $\frac{3x}{4} + \frac{2x}{5} = \frac{23}{2}$

3. 8b $1.38x - .4x = 1.7$

#3 $138x - 40x = 170$
 $98x = 170$
 $x = \frac{170}{98} = \frac{85}{49} = 1.73$

4. 8b (solve for F) $C = \frac{5}{9}(F-32)$

#4 $\frac{9C}{5} = (F-32)$
 $\frac{9C}{5} + 32 = F$

5. 9b (solve for x) $3x + ax = b$

6. 9b $\frac{x-5}{15} = \frac{3}{10}$

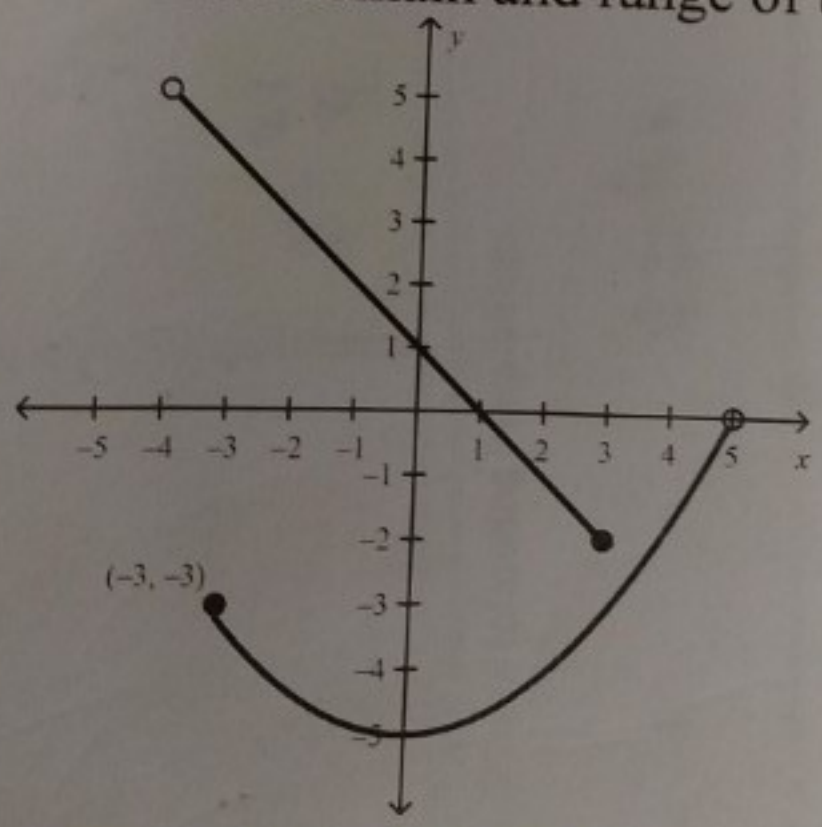
7. 9b (solve and graph) $x+3 \leq -4$ or $x+3 > 8$

#5 ~~$3(x)$~~
 $x(3+a) = b$
 $(3+a)(3+a)$
 $x = \frac{b}{3+a}$

8. 9b (solve and graph) $-2 < \frac{3-x}{4} \leq 8$

9. 10b Evaluate $f(x) = 3x + 5$ for $\{-2, 0, 4, 5\}$

10. 10b What is the domain and range of the two functions:



#6 $(x-5)(0) = 3(15)$
 $10x - 50 = 45 + 50$
 $10x = 95$
 $x = 9.5$

#7 $x \leq -7$ or $x > 5$

#8 $-29 \leq x < 11$

#8 $-8 < 3-x \leq 32$
 $-7 \quad -3 \quad -3$
 $-11 < -x \leq 29 \quad (-1)$
 $11 > x \geq -29$

1) Solve for x as an integer or fraction.

$$3(5x + 1) = 2x$$

$$15x + 3 = 2x$$

$$-15x \quad -15x$$

$$3 = -13x$$

$$\frac{-3}{13} = \frac{-13x}{-13}$$

$$x = \frac{-3}{13}$$

2) Solve for x as an integer or improper fraction.

$$4x + 12 = 35$$

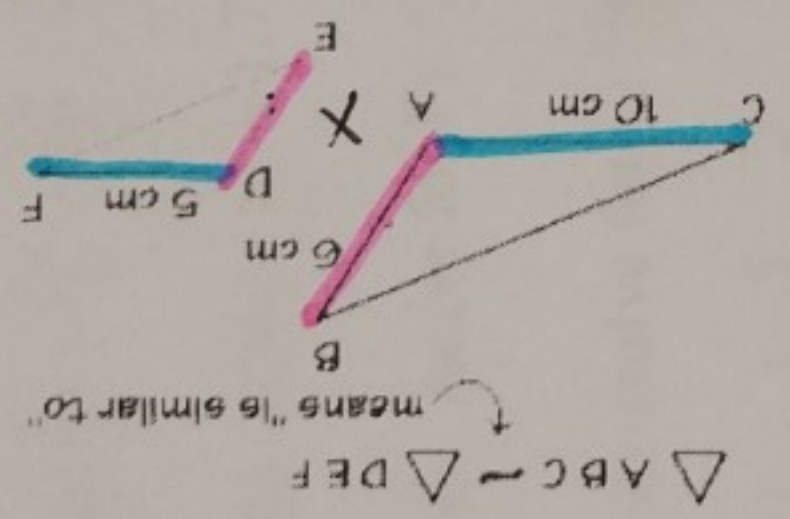
$$-12 \quad -12$$

$$4x = 23$$

$$\frac{4x}{4} = \frac{23}{4}$$

$$x = \frac{23}{4}$$

3) Find the length of DE?



$$\frac{X}{5} = \frac{6}{10}$$

$$X = 3$$

4) Solve and graph the following inequalities.

a) $6 \leq 9x - 3$

$$9 \leq 9x$$

$$1 \leq x$$

$$x \geq 1$$

b) $5 - 2x > 7$

$$-2x > 2$$

$$x < -1$$

c) $-3 < 5 - x < 15$

d) $x + 2 > -5$ or $x - 7 < -15$

$$x > -7$$

$$x < -8$$

$$-10 < x < 8$$

e) $-8 < x < 10$

Graph the inequality of the age a person can NOT get a driver's license.

Graph the inequality of the age of a person in high school.