

Final Exam Review

Topic Checklist

Chapter 3: Solve Linear Equations

□ Can you solve one, two and multi-step equations? (3.1-3.3)

Ex: a) $x - 4 = -9$

b) $\frac{2}{9}x = -4$

c) $4(x - 3) + 3 = 11$

□ Can you solve equations with variables on both sides and interpret answers appropriately? (3.4)

Ex: a) $2(x + 6) = 3(x + 4)$

b) $4(x - 5) = 2(x + 3)$

c) $6(3x + 6) = 9(2x + 4)$

d) $4(3x + 4) = 6(2x + 5)$

□ Can you set up and solve proportions? (3.5-3.6)

Ex: $\frac{2}{2x+1} = \frac{4}{6x+1}$

□ Can you solve percent problems? (3.7)

Ex: 30 is 45% of what number?

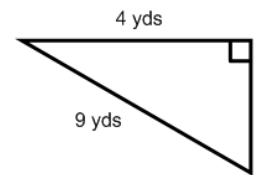
□ Can you rewrite equations in function form? (3.8)?

Ex: $4x - 5y = 20$

□ Can you solve problems involving the Pythagorean Theorem, including a) finding missing lengths or b) deciding if three sides can form a right triangle? (11.4)

Ex:

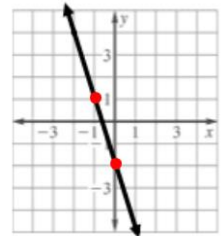
a)



b) 13, 12, 5

□ Can you find the slope of a graphed line? (4.4)

Ex:



□ Can you find the slope of a line given two points? Including identifying different types of slopes (i.e. positive, negative, zero or undefined)? (4.4)

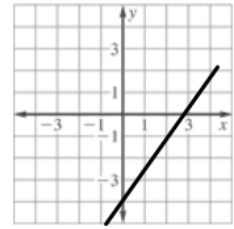
Ex: a) (20, 5), (10, 1)

b) (-3, 2), (-3, 7)

c) (4, 5), (8, 5)

□ Can you identify x and y intercepts given a graph? (4.3)

Ex:



□ Can you find x and y intercepts given an equation? (4.3)

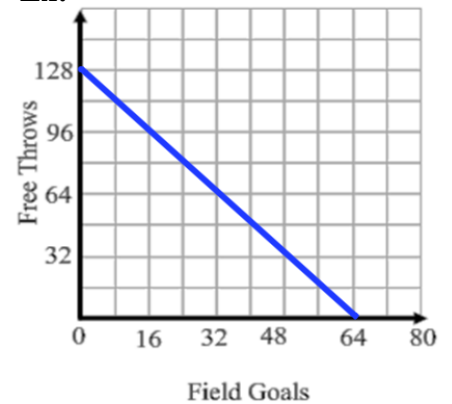
Ex: $2x - 5y = -10$

□ Can you graph using x and y intercepts? (4.3)

Ex: Graph $7x + 2y = 14$

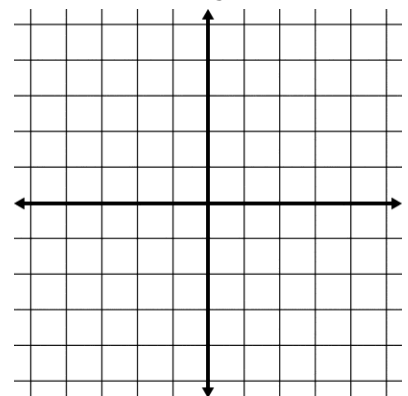
□ Can you identify possible combinations of a real-world situation given a graph? (4.3)

Ex:



□ Can you graph a line using slope-intercept form? (4.5)

Ex: Graph $y = -\frac{2}{3}x + 1$



□ Can you evaluate functions using function notation? (4.7)

Ex: a) If $f(x) = 2x - 3$,
evaluate when $x = 4$.

□ Can you write equations in slope-intercept form? (5.1-5.2)

Ex: a) $m = 7$ $b = -3$

□ Can you decide if two lines are parallel or perpendicular given their equations? (5.5)

Ex: Line A: $y = -3x + 1$

Line B: $-x + 3y = 1$

Line C: $2x - 6y = 4$

□ Can you solve and graph inequalities on a number line? (6.1-6.3)

Ex: Solve and graph:
 $-2x + 1 \geq 5$

□ Can you identify if an inequality has “no solution” or
“all real numbers?” (6.3)

Ex: a) $3(2x - 4) > 6x + 8$

b) $4(4x - 9) \leq 8(2x - 2)$

□ Can you decide if an ordered pair is a solution to a linear system? (7.1)

Ex: Is $(-3, 1)$ a solution to:
 $x + y = -2$
 $x + 5y = 2$

□ Can you solve a system of equations by graphing? (7.1)

Ex: $-x + y = -7$
 $x + 4y = -8$

□ Can you simplify expressions involving positive, negative and zero exponents? (8.1-8.3)

Ex: a) $\frac{(2x) y^5}{-4x^2 y^2}$

b) $\frac{4x^2 y^4}{8xy^6}$

□ Can you write expressions in scientific notation? (8.4)

Ex: 267,500,000