

CONCEPT/SKILLS REVIEW FROM GRADE 9

1. Rewrite each question in your notebook and simplify completely, showing all your work neatly.

a) $\frac{-25}{5} - (-2)[-3^2 - 2]$

b) $-3 - 2(-3 - 4)$

c) $(-6)(-3) - 4(-2)$

d) $-3 - 2[15 \div (-5) - (-2)]$

e) $-2^2 - 2(-3)(-4)$

f) $(6)(-1)[-4 + 2]^2$

g) $(-2)^2 - (-12)[-3 - 2(-1)]$

h) $(-2)(-3) - 4(-2)[-2^2 - 2]$

2. Add or subtract, reducing your final answer to lowest terms.

a) $\frac{1}{5} + \frac{1}{2}$

b) $\frac{2}{3} + \frac{1}{4}$

c) $\frac{3}{2} + \frac{1}{4}$

d) $\frac{1}{5} - \frac{1}{10}$

e) $\frac{3}{2} - \frac{5}{7}$

3. Multiply or divide, reducing your final answer to lowest terms.

a) $\frac{1}{2} \times \frac{3}{5}$

b) $\frac{3}{4} \times \frac{7}{10}$

c) $\frac{3}{5} \times 15$

d) $\frac{5}{8} \div \frac{13}{16}$

e) $\frac{3}{7} \div \frac{4}{5}$

f) $\frac{2}{11} \div \frac{3}{5}$

g) $\frac{5}{7} \div 10$

4. Find the slope of a line that passes through the following points.

a) A(2,-2) and B(5,1)

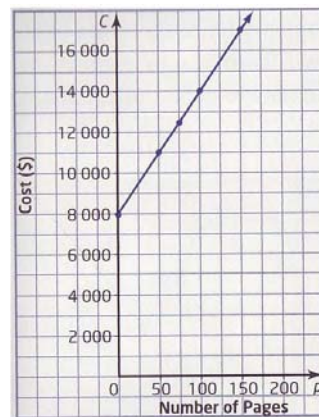
b) C(4,-3) and D(-8,7)

c)

E(-2,6) and F(-8,-6)

5. Find the equation of the line for each question in #4.

6. Find the equation of the line that represents the following graph.



7. Given the following equations of the line, state the slope (m) and y-intercept.

a) $2x - 4y = 14$

b) $-4x + 2y = 12$

c) $5x - 10 - 2y = 20$

d) $8 - 10x = 2y - 6$

8. Find the equation of each line if:

a) the slope is -5 and the y-intercept is 6

b) the slope is 2 and the line passes through B(-5,3)

c) the slope is 2 and it passes through A(4,-9)

d) it passes through (22,-9) and (2,11)

9. Graph the following lines, using the slope y-intercept method. Label each line.

a) $y = -2x + 1$

b) $y = \frac{3}{2}x - 4$

c) $y = 3$

10. Graph the following lines on the grid provided using the intercept method. Show all your work clearly.

a) $8 = -2y - 4x$

b) $8x - 4y = -24$

11. Solve the system of equations graphically by using a method of your choice.

a) $\begin{cases} 3x + 4y = 12 \\ 2x + 3y = 9 \end{cases}$

b) $\begin{cases} x + 3y = 3 \\ y = x + 5 \end{cases}$

ANSWERS:

1.a) -27 b) 11 c) 26 d) -1 e) -28 f) -24 g) -8 h) -42

2.a) 7/10 b) 11/12 c) 7/4 d) 1/10 e) 11/14

3.a) 3/10 b) 21/40 c) 9 d) 10/13 e) 15/28 f) 10/33 g) 1/14

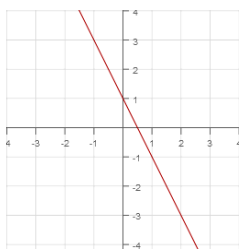
4. a) 1 b) $\left(-\frac{5}{6}\right)$ c) 2

5. a) $y = 1x - 4$ b) $y = -\frac{5}{6}x + \frac{3}{2}$ c) $y = 2x + 10$

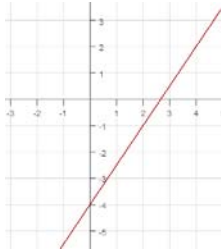
6. $y = 60x + 8000$

7. a) $m = \frac{1}{2}$, y-intercept = $\left(0, -\frac{7}{2}\right)$ b) $m = 2$, y-intercept = $(0, 6)$ d) $m = \frac{5}{2}$, y-intercept = $(0, -15)$

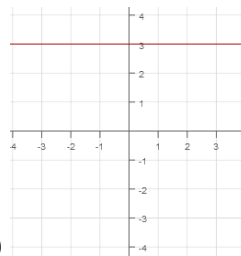
8. a) $y = -5x + 6$ b) $y = 2x + 13$ c) $y = 2x - 17$ d) $y = -1x + 13$



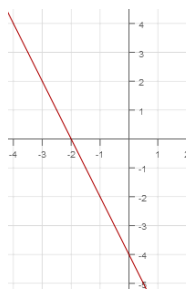
9. a)



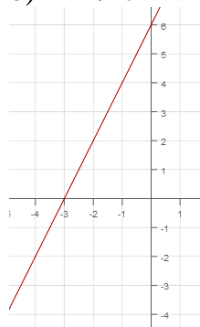
b)



c)



10. a)



b)

11. a) $(0, 3)$

b) $(-3, 2)$