

Course: MFM2P Gr. 10 AppliedLesson: 3 - 1Unit: Linear RelationsTopic: Prerequisite Skills

✚ *homework check:* none✚ *note:* Prerequisite Skills for Linear Relations

When working with linear relations, we must know how to evaluate slopes which relies on simplifying fractions. For example, reduce each of the following to lowest terms.

a)

$$\begin{aligned}\frac{10}{12} &= \text{find the greatest common factor} \\ &= \frac{10 \div 2}{12 \div 2} \text{ divide both the numerator and denominator by the GCF} \\ &= \frac{5}{6}\end{aligned}$$

b)

$$\begin{aligned}\frac{24}{36} &= \text{find the GCF} \\ &= \frac{24 \div 12}{36 \div 12} \text{ divide both the numerator and denominator by the GCF} \\ &= \frac{2}{3}\end{aligned}$$

Sometimes it is useful to turn fractions into decimals and vice versa. For example, turn the given fractions into decimals or decimals into fractions.

a)

$$\begin{aligned}\frac{3}{7} &= \text{on your calculator, punch 3 divide 7} \\ &= 0.4285714 \text{ round any decimals to one place unless told otherwise} \\ &= 0.4\end{aligned}$$

b)

$$\begin{aligned}\frac{9}{5} &= \text{on your calculator, punch 9 divide 5} \\ &= 1.8\end{aligned}$$

c)

0.5 = the five is in the tenths place, so we write 5 as a part of 10

$$= \frac{5}{10} \text{ and reduce to lowest terms}$$

$$= \frac{1}{2}$$

d)

0.125 = the last number is in the thousandths place, so we write 125 as part of 1000

$$= \frac{125}{1000} \text{ and reduce to lowest terms}$$

$$= \frac{1}{8}$$

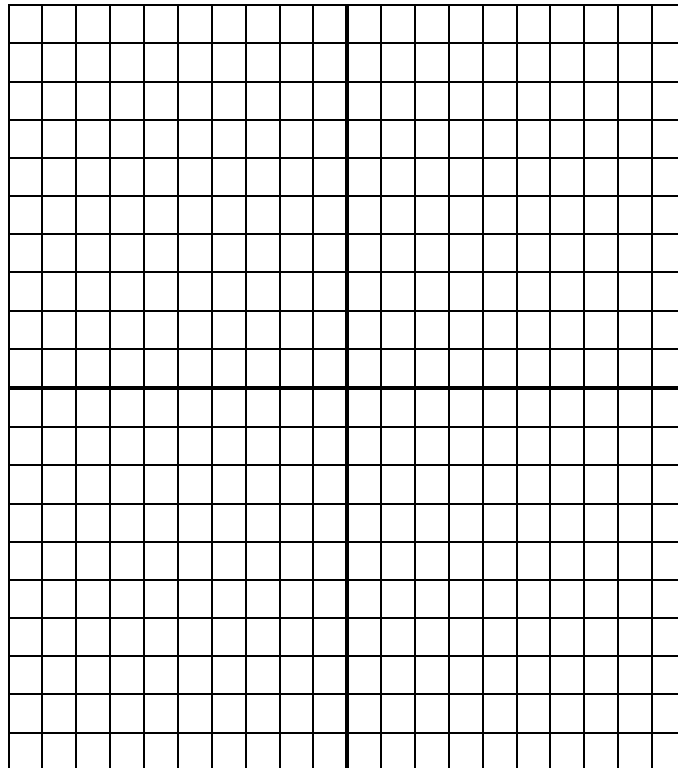
**When working with linear relations, we must remember our coordinate system.
Place each of the following points on the grid provided.**

a) (3, 6)

b) (-2, 4)

c) (5, -1)

d) (-7, -4)



✚ **homework assignment: Lesson 3 - 1**

Lesson 3 – 1: Prerequisite Skills for Linear Relations**1. Find the greatest common factor.**

a) 18, 21

b) 5, 20

c) 6, 9

d) 8, 12

e) 18, 24

f) 70, 140

g) 125, 50

h) 72, 36

2. Express each fraction in lowest terms.

a) $\frac{12}{36} =$

b) $\frac{4}{10} =$

c) $\frac{24}{48} =$

d) $\frac{4}{12} =$

e) $\frac{144}{108} =$

f) $\frac{52}{24} =$

g) $\frac{15}{45} =$

h) $\frac{42}{49} =$

3. Complete the table given.

Fraction	$\frac{1}{2}$	$\frac{3}{5}$	$\frac{3}{8}$			
Decimal				0.25	0.05	0.625

4. Evaluate each of the following.

a) $5 - (-8) =$

b) $4 - 6 =$

c) $-2 - 2 =$

d) $-5 + 7 =$

e) $-4 - (-2) =$

f) $-12 + (-3) =$

g) $3 - 9 =$

h) $-4 + 4 =$

5. Evaluate. Simplify each numerator and denominator first.

a) $\frac{6-4}{3-7} =$

b) $\frac{2-5}{4-3} =$

c) $\frac{3-8}{2-6} =$

d) $\frac{-1-3}{2-(-4)} =$

6. Write the coordinates of each point shown on the graph.

A _____

B _____

C _____

D _____

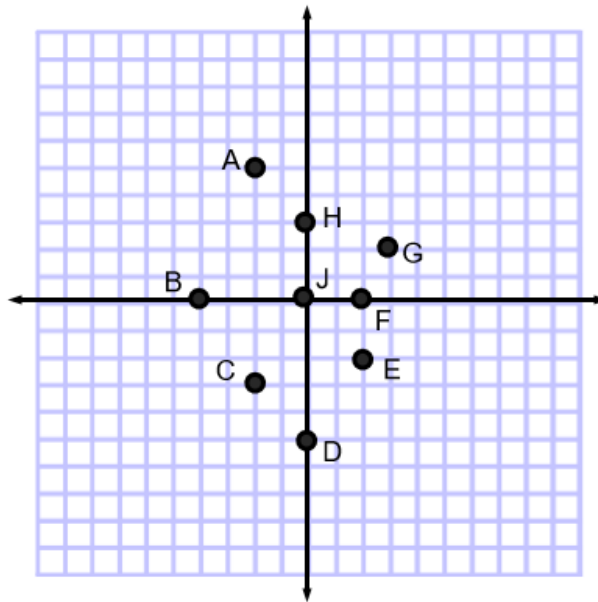
E _____

F _____

G _____

H _____

J _____

**7. Solve for each**

a) $-3x = -15$

b) $4x - 16 = 0$

c) $\frac{1}{2}x = -3$

d) $0.6x = -2$

e) $3x - 2 = -14$

f) $\frac{x+3}{2} = -4$

g) $2x - 4x = -6$

h) $-x - 5 = 11$

8. Evaluate each expression if $x = -3$

a) $4x + 3 =$

b) $-2x + 5 =$

c) $-3x + 4 =$

d) $3 - 5x =$