

**Grade 11 College Math****Day: Lesson 8 - 1****Unit: Probability****Topic: Prerequisite Skills****# note: Prerequisite Skills**

Prerequisite skills for probability include the use of percent and decimals. For example, turn each of the following fractions into decimals without the use of a calculator.

a)  $\frac{3}{4}$

0.75

$$\begin{array}{r} 4 \overline{) 3.00} \\ \underline{28} \phantom{0} \\ 20 \phantom{0} \\ \underline{20} \\ 0R \end{array}$$

b)  $\frac{5}{12}$

0.416

$$\begin{array}{r} 12 \overline{) 5.000} \\ \underline{48} \phantom{00} \\ 20 \phantom{0} \\ \underline{12} \phantom{0} \\ 80 \phantom{0} \\ \underline{72} \phantom{0} \\ 8R \end{array}$$

Express each decimal as a fraction in lowest terms using place value as the denominator.

0.5 =

a)  $= \frac{5}{10}$

$= \frac{1}{2}$

$$0.125 =$$

$$\begin{aligned} \text{b)} \quad &= \frac{125}{1000} \\ &= \frac{1}{8} \end{aligned}$$

Add or subtract each of the following. Answers must be in fraction form. Show all work.

$$\begin{aligned} \frac{3}{4} + \frac{1}{5} &= \frac{3 \times 5}{20} + \frac{1 \times 4}{20} \\ \text{a)} \quad &= \frac{15}{20} + \frac{4}{20} \\ &= \frac{19}{20} \end{aligned}$$

$$\begin{aligned} \frac{2}{3} - \frac{4}{7} &= \frac{2 \times 7}{21} - \frac{4 \times 3}{21} \\ \text{b)} \quad &= \frac{14}{21} - \frac{12}{21} \\ &= \frac{2}{21} \end{aligned}$$

Multiply each of the following. Answers must be in fraction form. Show all work.

$$\begin{aligned} &\frac{2}{5} \text{ of } 320 \\ \text{a)} \quad &\frac{2}{5} \times 320 = \frac{2 \times 320}{5} \\ &= \frac{640}{5} \\ &= 128 \end{aligned}$$

$$\begin{aligned} \frac{3}{8} \times \frac{7}{9} &= \frac{3 \times 7}{8 \times 9} \\ \text{b)} \quad &= \frac{21}{72} \\ &= \frac{7}{24} \end{aligned}$$

**✚ homework assignment: Lesson 8 - 1**

**Lesson 8 – 1:****1. Express each fraction as a decimal.**

a)  $\frac{97}{100} =$

b)  $\frac{2}{5} =$

c)  $\frac{3}{20} =$

d)  $\frac{5}{8} =$

**2. Express each fraction as a decimal to the nearest 4 decimal places.**

a)  $\frac{17}{40} =$

b)  $\frac{4}{13} =$

c)  $\frac{5}{6} =$

d)  $\frac{4}{9} =$

**3. Express each decimal as a fraction in lowest terms.**

a)  $0.75 =$

b)  $0.16 =$

c)  $0.65 =$

d)  $0.125 =$

e)  $0.3333... =$

f)  $0.001 =$

g)  $0.4444... =$

h)  $3.325 =$

**4. Express each percent as a fraction in lowest terms.**

a)  $30\% =$

b)  $25\% =$

c)  $80\% =$

d)  $45\% =$

e)  $66.6666... \% =$

f)  $100\% =$

g)  $0.05\% =$

h)  $1.05\% =$

**5. Evaluate. Show your process and decimal answers will NOT be accepted.**

a)  $1 - \frac{1}{4} =$

b)  $\frac{1}{2} + \frac{1}{6} =$

c)  $1\frac{1}{3} - 1\frac{1}{4} =$

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

**6. Evaluate. Show your process and decimal answers will NOT be accepted.**

a)  $\frac{1}{5} \text{ of } 80 =$

b)  $\frac{2}{13} \times \frac{3}{4} =$

c)  $\frac{2}{3} \text{ of } 24 =$

d)  $\frac{8}{3} \times 2\frac{3}{4} =$

**7. Use a calculator to evaluate each question in #6.**

a)

b)

c)

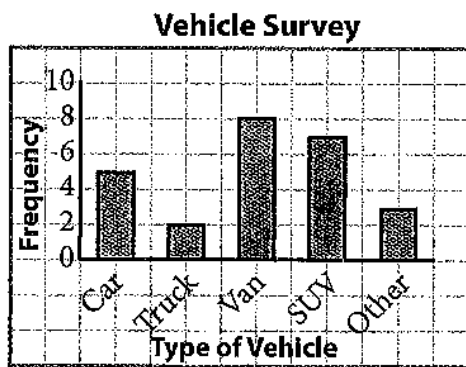
d)

8. The table shows the results of rolling a six-sided die several times.

Results	Frequency
1	3
2	4
3	3
4	5
5	2
6	1

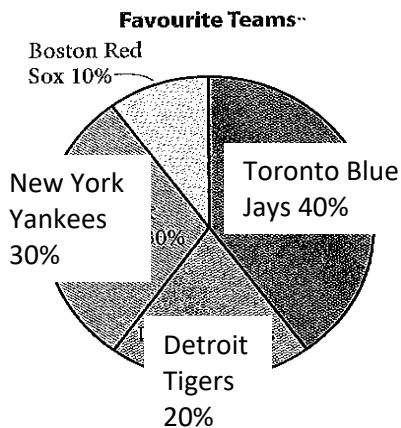
- What was the total number of rolls?
- What percent of the total number of rolls resulted in a 4?
- What fraction of the total number of rolls resulted in an even number?
- For the number of rolls that resulted in an even number, what percentage resulted in a 2?

9. Consider the following graph.



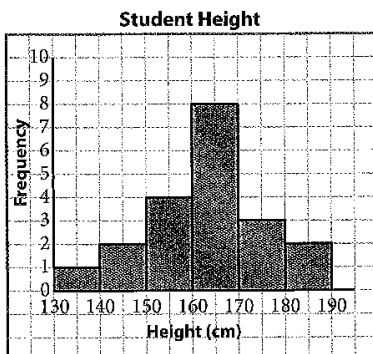
- What type of graph is this?
- How many vehicles were seen?
- What was the most popular vehicle?
- What fraction of the total vehicles were cars?
- What percent of the total were trucks?

10. Two hundred people were surveyed. The results are shown in the graph.



- Of the people surveyed, how many like Boston?
- What fraction of the people surveyed prefer Toronto?
- What percent of the total like either Detroit or Toronto?
- What type of graph is shown?

11. Given the graph below,



- How many students are in the class?
- How many students are between 160cm and 170cm?
- What percent of students are shorter than 160cm?
- What fraction of students are taller than 170cm?