

Complete all questions on separate sheet unless otherwise specified. **CLEARLY** show your work when calculations are performed. Attach this sheet to the front. (1 mark each unless specified)

1. Simplify. Then, for each simplified expression identify: (2 marks each)
- the degree
 - the type of expression it is: monomial, binomial, trinomial, or polynomial

a) $x - 3x + x^2 + 7 + 2x^2$

b) $(-p + 6) - (-p + 3)$

c) $(3x^2 + 6xy + 5y^2) + (6x^2 + 6x + 5y)$

2. Arrange the following numbers in ascending order:

$(-4)^3$ 5^2 7 2^5 $(-2)^4$

3. Replace each with $>$, $<$, or $=$ to make each statement true.

a) $\frac{-6}{4}$ $\frac{3}{-2}$

b) $\frac{-1}{3}$ -0.3

c) $-3\frac{5}{8}$ $-3\frac{7}{9}$

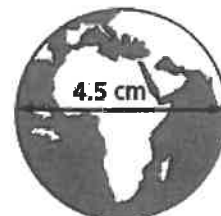
4. Canada's population is about 33 640 000. The United States has about $9\frac{1}{10}$ times Canada's population. Belgium's population is about $\frac{1}{3}$ of Canada's. Justify your answer for each of the following.
- How many people live in the United States?
 - How many people live in Belgium?
 - How many times greater is the population of the United States than the population of Belgium? Express your answer as a fraction.

5. Evaluate. For part a), keep your answer in fraction form. For part b), express your answer to the nearest thousandth. Show your work. (2 marks each)

a) $\left(\frac{2}{3}\right)^2 \times \left(\frac{-2}{-3}\right)^3 + \frac{1}{3} \div \frac{2}{5}$

b) $\frac{(-3)^0 (2.5)^2 - (1.1)^3 (-2)^6}{(-1.2 + 3^3)^2}$

6. Determine the diameter of the Earth. Express your answer to the nearest tenth. The scale factor for the image of the diameter of Earth is 1 cm:2834.7 km.

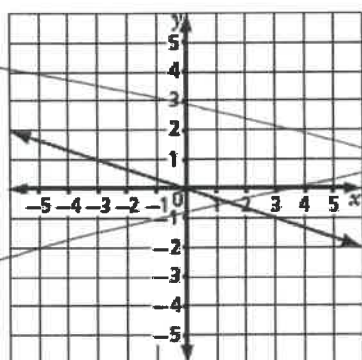


7. A child is playing with five wooden blocks. Each block is a cube with an edge length of 4.5 cm. Express your answers to the nearest tenth. (2 marks each)
- Calculate the total surface area of the five blocks.
 - The child builds a tower by stacking five blocks directly on top of each other. What is the surface area of the tower (including the base)?

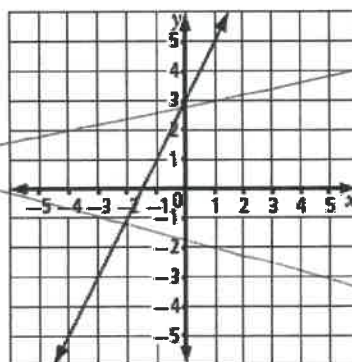
~~8.~~

Determine the linear equation that models each graph

a)



b)



skip this one

9. Identify a decimal number between the following pair of rational numbers.

$$\frac{-23}{30}, \frac{5}{6}$$

10. Determine the missing values.

a) $\frac{1}{\boxed{}} = \frac{5.9}{76.7}$ b) $\frac{1}{0.08} = \frac{2.7}{\boxed{}}$

~~11.~~

A car rental company charges a flat rate of \$30 plus \$0.05 per kilometre.

skip this one

- Create a table of values for the first 500 km.
- Graph the linear relation. (on graph paper!) (2 marks)
- Use the graph to approximate how much it would cost to drive the car 250 km.
- Using the graph, approximate how many kilometres you could drive if you had \$52.50.

Review Assignment #7 KEY

1a. $3X^2 - 2X + 7$ Degree = 2 Type: Trinomial

1b. 6 Degree = 0 Type: Monomial

1c. $9X^2 + 5y^2 + 6xy + 6x + 5y$

2. -64, 7, 16, 25, 32

3a. =

3b. <

3c. >

4a. $33\,640\,000 \times 9.1 = 306\,124\,000$ for USA

4b. $33\,640\,000 \times 1/3 = 11\,213\,333.3$ which is approximately 11 213 333 Belgium

4c. $306\,124\,000 / 11\,213\,333 = 27.3x$ greater population in US compared to Belgium

5a. $1407/1458$ can be reduced to $469/486$

5b. -0.119

6. 12 756.15 km

7a. 607.5 cm^2 is total surface area for 5 blocks.

7b. 445.5 cm^2 surface area if blocks are stacked.

8a. $y = -3x$

8b. $y = 2x + 3$

9. $-24/30 = -0.8$

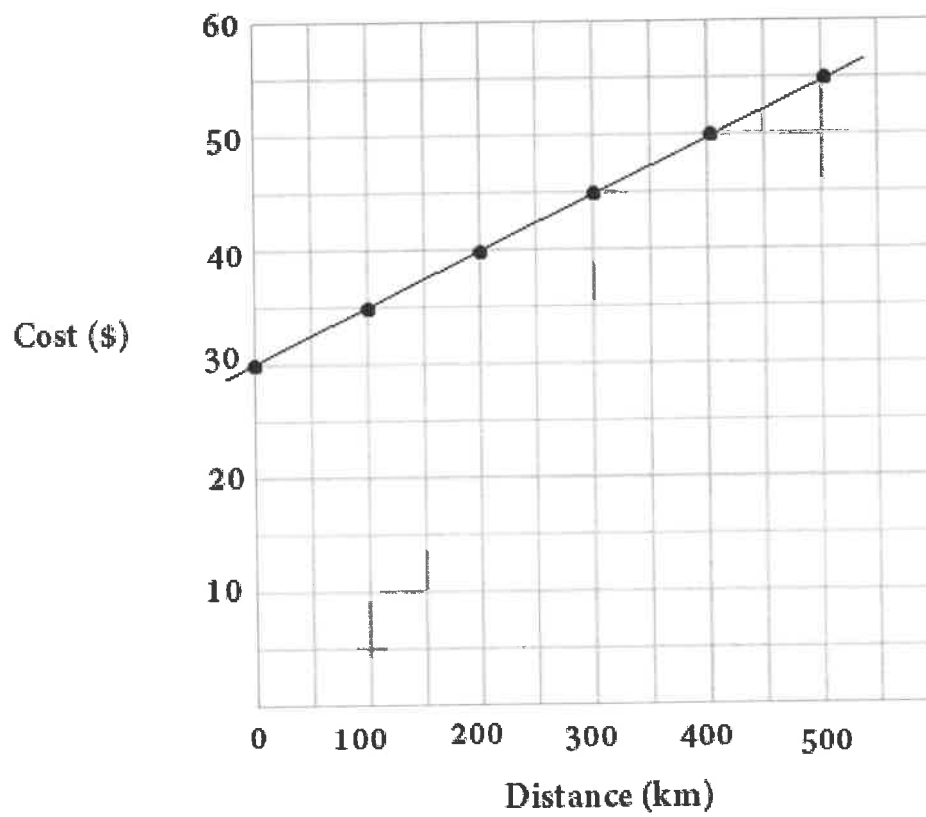
10a. 13

10b. 0.216

11a.

Distance (km)	Cost (\$)
0	30
100	35
200	40
300	45
400	50
500	55

11b.



11c. \$42.50

11d. 450km