

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. Write the following rational numbers in ascending order.

$$0.\overline{6}, -0.9, -\frac{4}{5}, 2.7, -2\frac{3}{4}, -\frac{2}{3}$$

2. Identify a fraction between -6.3 and -6.4.

3. Calculate to the nearest thousandth: $3.2 - 5.6 \times 2.9 \div (3.1 + 2.8)$

4. Calculate: $\left(-3\frac{1}{2}\right) - \left(-\frac{1}{4}\right) \div 4\frac{2}{7}$ (2 marks)

5. The label on a 1-L can of paint states that the paint will cover an area of 6 m².

- a) What is the side length of the largest square area that the paint will cover?
Express your answer to the nearest hundredth.
- b) If you have 4.75 L of the same paint, what is the side length of the largest square area that you could now cover?

6. Write as a single power and then evaluate: (2 marks each)

a) $4^2 \times (4^3)^5$

b) $\frac{(-4)^2(-4)^{10}}{(-4)^3}$

c) $3^{-6} \div 3^{-2}$

7. Calculate (show your work): $5^3 + (2^4 - 3^0)^2(3^3 - 9^2)$ (2 marks)

8. A population of 50 bacteria doubles in number every hour.

- a) Write an expression involving exponents that models the population present (N) after t hours.
- b) What is the population after 7 hours?

9. Determine the missing values.

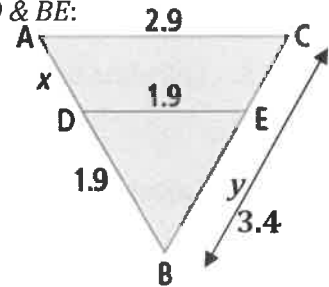
a) $\frac{1}{3.5} = \frac{x}{42}$

b) $\frac{1}{x} = \frac{2.7}{49.95}$

c) $\frac{1}{0.09} = \frac{4.6}{x}$

10. The height of the Eiffel Tower in Paris is 300 m. What scale factor would you use if you wanted to draw the tower 10 cm high?

11. Given that $\triangle ABC \sim \triangle DBE$, determine the missing lengths AD & BE :
(2 marks)



12. A 215 cm long closet is drawn on a scale diagram to be 5 cm long.

a) What is the scale of the diagram (in 1:___ form)?

b) If the width of the closet on the diagram is 3.7 cm what is the actual width?

Review Assignment 5 KEY

1. $-2\frac{3}{4}, -0.9, -\frac{4}{5}, -\frac{2}{3}, 0.6666, 2.7$

2. $-\frac{635}{100} = -\frac{127}{20}$

Or $-\frac{634}{100} = -\frac{317}{50}$

Or $-\frac{636}{100} = -\frac{159}{25}$

3. 0.44745

4. $-\frac{413}{120}$

5a. 2.45m

b. 5.34m

6a. 4^{17}

b. $(-4)^9$

c. 3^{-4}

7. -12025

8a. $50 \times 2t = N$

b. 6400 bacteria after 7 hours.

9a. 12

b. 18.5

c. 0.41

10. $3.3 \times 10^{-4} \times \text{scale factor}$ (30 000 x is half mark because it's the reciprocal)

11a. $1.0 = x$ (AD) b. $2.23 = y$ (BE) *this answer was rounded

12a. 1: 43

b. 159.1cm

