



TERM

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Test 1

Answer the following questions. Work neatly.

- 1 Solve the following problems.
 - a A car travels at 30 m/s constantly. How far will it travel in $1\frac{1}{2}$ h?
 - b You borrow R800 at 5% p.a. compound interest. How much will you owe after 3 years?
- 2 Calculate:
 - a $-24(-20 + 5) \div 5(-3) + 14(-2 + 3)$
 - b $(-4)2 - (-3 - (-2))$
 - c $(-50 \div -5) \times 6$
 - d $\sqrt[3]{216} \div \sqrt{144}$
- 3 a Calculate: $\frac{1}{2} + \frac{3}{4} - \frac{5}{8}$
 b Write $\frac{39}{60}$ as a decimal fraction and a percentage.
 c Calculate.
 - (i) $\frac{15}{36} \times \frac{6}{5}$
 - (ii) $\frac{4}{7} \div \frac{8}{49}$
- d Calculate: $1\frac{2}{3} \times 2\frac{3}{4} - 3\frac{5}{8}$.
- 4 Calculate without using a calculator.
 - a $24,7 + 2,47$
 - b $37,39 - 3,739$
 - c $19 \times 26,3$
 - d $41 \times 5,78$
 - e $56 \div 3,2$
 - f $7,5 \div 1,25$
 - g $\sqrt[3]{0,125}$
 - h $0,8(0,6 \div 0,06)$
 - i $(0,12)^2$
- 5 Calculate the following.
 - a $3^2 \times 2^3$
 - b $5^9 \div 5^7$
 - c $(2^3)^2$
 - d $(-4 \times 5^2)^3$
 - e $(4^5 \times 5^4)^0$
 - f $(6,5 \times 10^{12}) \div (1,3 \times 10^6)$
- 6 Write in scientific notation.
 - a 4 173 800
 - b 0,000652
- 7 For sequence A: 2; 5; 8; 11; ... and for sequence B: 2; 4; 8; 16; ..., find the following.
 - a The general rule for T_n .
 - b The value of T_6 .
 - c The position of the term with the value of 512.
- 8 Look at the table below.

x	-2	-1	0	1	2	79	n
y	-7	-5	-3	-1	1	m	79

 - a Determine the equation that describes the relationship between x and y .
 - b Use the equation to determine the values of m and n .
- 9 Simplify.
 - a $-4(x^3 - x) + x(1 - x^2)$
 - b $(x - 6)(x + 7)$
 - c $(2x - 5)^2$
 - d $\frac{12x^4 - 15x^3 + 3x(-2x)}{3x^2}$
 - e $\sqrt{(16x^2 + 9x^2)}$
 - f $\sqrt[3]{(27x^6)} - \sqrt{(16x^4)} + x^2$
- 10 Solve for x .
 - a $2^x = 64$
 - b $3^{x-4} = 1$
 - c $3(7x - 2) = 120$
 - d $7(x + 1) - 2 = 4(x + 5)$
 - e $\frac{x}{4} + \frac{x}{3} - 5 = \frac{x}{6}$
 - f $\frac{2(3x - 7)}{5} = 8$