**Chapter 1: Linear relations**

**Revision A (32 marks)**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part A – Short Answer and multiple-choice questions** (10 marks)

**1** The expanded and simplified form of 2*x*(*x* + 3) is:

**2** simplify fractions $\frac{8y}{40}$:

**3** $\frac{x}{4}+\frac{x}{2}$ in simplest form is:

**4** simplify fractions $\frac{\left(x+3\right)\left(x-1\right)}{x+3}$

**5** simplify fractions $\frac{a}{3}×\frac{a}{6}$

**6** simplify fractions $\frac{2x}{7}+\frac{3x}{7}$

**7** The gradient for the following linear relation is:



**8** Solve inequalities $8x\leq -16$:

**9** The equation of the straight line shown is:



**A**  **B**  **C** 

**D**  **E** 

**10** Solve equation 5a+6=26:

**Part B – Short-answer** (22 marks)

**1** Simplify the following expressions

 **a** $\left(2a+7\right)+3a-1$ **b** $\frac{p^{2}}{q}×\frac{q^{2}}{p}$

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 **c  d** $\frac{10k}{5}$

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 **e** $\frac{7}{m}×\frac{m}{14}$ **f** $\frac{3n}{2}÷\frac{n}{4}$

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 **g** $\frac{4}{5}+\frac{2}{3}$ **h** $\frac{2x}{4}+\frac{x}{3}$

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 (8 × ½ = 4 marks)

**2** Solve the following equations.

 **a**  **b** 

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 **c  d** $\frac{4x}{3}=\frac{2x}{7}$

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 (½ + ½ + 1 + 1 = 3 marks)

**3** Solve the following inequalities.

 **a** $3-x\geq 7$ **b** $2x+5<-4$

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(1 + 1 = 2 marks)

**4** Graph each of the following linear equations using the given method. Clearly mark the two points you use to draw the graph.

 **a y=3x+4 b **

Use gradient and y-intercept. Use axis intercepts.

  

 (2 + 2 = 4 marks)

**5** Find the equation of the straight line shown.



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(2 marks)