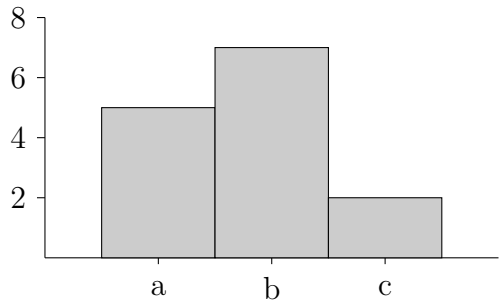
Not a real exam Version A Name: _____

Instructions: This is just a test of the emergency exam broadcast system. If it were a real exam, this note would be followed by instructions on how to complete

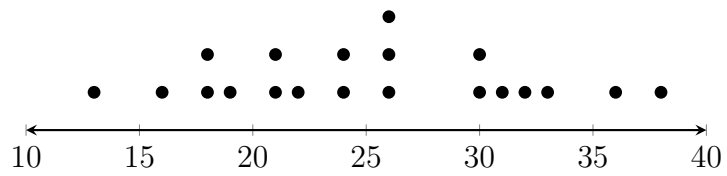
Is this the real life? Is this just fantasy?

1. What is the value of $\frac{2}{3}$ as a decimal?

2. Here is a histogram:



3. This is a dot plot:



4. Find the class width of the set: 21, 31, 33, 55, 62, 74, 77, 84

5. (2 pts) Solve the inequality $\frac{1.0}{x+2} \geq \frac{3.0}{x+1}$:

   $1.0x + 2.0 \geq 3.0x + 3.0$ $(-\infty, -2.5] \cup (-2, -1)$

6. (2 pts) Solve the inequality $\frac{7.0}{x-1} \geq \frac{5.0}{x+4}$:

   $7.0x - 7.0 \geq 5.0x + 20.0$ $[-16.5, -4) \cup (1, \infty)$

7. (2 pts) Solve the polynomial equation: $x^2 + 2x - 15 = 0$.

   $x^2 + 2x - 15 = (x+5)(x-3)$

   $\Rightarrow \quad x \in \{-5, 3\}$

8. (4 pts) Solve the polynomial equation: $4x^2 - 7x - 25 = 0$.

$$4x^2 - 7x = 25$$

$$x^2 - \frac{7x}{4} = \frac{25}{4}$$

$$x^2 - \frac{7x}{4} + \frac{49}{64} = \frac{449}{64}$$

$$\left(x - \frac{7}{8}\right)^2 = \frac{449}{64}$$

$$\left(x - \frac{7}{8}\right)^2 = \frac{449}{64}$$

$$x - \frac{7}{8} = \pm\frac{\sqrt{449}}{8}$$

$$x \in \left\{\frac{7}{8} - \frac{\sqrt{449}}{8}, \frac{7}{8} + \frac{\sqrt{449}}{8}\right\}$$