Find the mistake(s). Make the correction(s) and solve them correctly.

1.) -2(x - 8) + 4x = -12

 -2x - 16 + 4x = -12

 -2x - 16 = -12

 +16 +16

 -2x = 4

 2 2

 x = 2

2.) 7x – 5 < 13x – 3

 -7x -7x

 -5 > 6x – 3

 +3 +3

 -2 > 6x

 6 6

 $\frac{-1}{3}$ > x

1. Complete the Justification for each step. The reasons are listed below.

|  |  |  |
| --- | --- | --- |
| Step | Equation | Reason |
|  | 5(1 + 4h) + 2h = 27 | Given |
| 1 | 5 + 20h + 2h = 27 |  |
| 2 | 5 + 22h = 27 |  |
| 3 | 5 – 5 + 22h = 27 - 5 |  |
| 4 | 22h = 2222 22 |  |
| 5 | h = 1 |  |

Subtraction Property of Equality Distributive Property

Addition Property of Equality Multiplication Property of Equality

Division Property of Equality Combining Like Terms

Solve the equations and inequalities and show ALL of your steps.

1. 6.78j – 5.2 = 4.33j + 2.15
2. $\frac{3}{5}f+24=4- \frac{1}{5}f$
3. 3b – 6 ≥15 + 24b

Review. Simplify the following expressions. Rewrite all exponents positive.

1. $\frac{x^{-2}y^{8}z^{-4}}{zy^{-1}x^{-5}}$

Factor the following quadratic expression.

1. $x^{2}+5x+6$