

HOMEWORK 12

January 10, 2021

*I would like to remind you that the homework should be done on a separate piece of paper.
There is not enough space on this handout to show all work. **You must show all steps!***

1. Simplify:

a) $\sqrt{9} + \sqrt{25} =$

b) $3\sqrt{9} - 16 =$

c) $0.1\sqrt{400} + 0.2\sqrt{1600} =$

d) $\sqrt{81} - \sqrt{144} =$

e) $-2.7\sqrt{169} - 1.5\sqrt{900} =$

f) $\frac{1}{3}\sqrt{324} + \frac{2}{7}\sqrt{441} =$

2. Simplify:

a) $\frac{\sqrt{999}}{\sqrt{111}} =$

b) $\sqrt{162} \cdot \sqrt{2} =$

c) $\frac{\sqrt{2}}{\sqrt{18}} =$

d) $\sqrt{10} \cdot \sqrt{40} =$

e) $\frac{\sqrt{15}}{\sqrt{735}} =$

f) $\sqrt{\frac{2}{3}} \cdot \sqrt{\frac{3}{8}} =$

$$3. \quad \frac{3.75 \div 1\frac{1}{2} + \left(1.5 \div 3\frac{3}{4}\right) \cdot 2\frac{1}{2} + \left(1\frac{1}{7} - \frac{23}{49}\right) \div \frac{22}{147}}{2 \div 3\frac{1}{5} + \left(3\frac{1}{4} \div 13\right) \div \frac{2}{3} - \left(2\frac{5}{18} - \frac{17}{36}\right) \cdot \frac{18}{65}} =$$

4. Solve:

$$1) \quad 5(2x + 6) = -4(-5 - 2x) + 3x$$

$$2) \quad 8(1 + 5x) + 5 = 13 + 5x$$

$$3) \quad 3(x + 1) - 5x = 12 - (6x - 7)$$

$$4) \quad \frac{x}{3} + \frac{x+1}{2} = 2$$

Solve the following word problems by writing an equation. Make sure to show all steps!

5. On the first of three tests, Natasha scored 72 points. On the third test, her was 1 point more than on the second. Her average on the three tests was 83. What were her scores on the second and third tests?

6. The difference of two integers is 9. Five times the smaller is 7 more than three times the larger. Find the numbers.