

SHOW ALL WORK to receive full credit.

Simplify the following expressions using positive and negative integers. (2 points each)

1. $\frac{x}{-15x}$

2. $7x - 6 + 19 - 13x$

3. $-2(5x - 7) - 9 + 13x$

Use the percent Formula $\frac{\text{is}}{\text{of}} = \frac{\%}{100}$ to solve the following. Round money answers to the nearest cent (hundredth), all others to the nearest tenth. (2 points each)

4. 211 is _____% of 260

5. 72 is 48% of _____

6. 33% of 170 is _____

7. 114 out of 125 is _____%

Solve the following equations. Answers must be reduced to lowest terms, but may be left as either improper fractions or mixed numbers. (3 points each)

8. $3x + 3 = -18$

9. $12x - 8 = 9x + 32$

10. $-3(-2x - 8) + 3x = -4(-x - 10) + 4$

11. $\frac{5x+6}{4} = \frac{3x-4}{3}$

Answer each of the following applications to Mental Percents questions. Answers must be rounded to the nearest cent (hundredths). (4 points)

12. Ms. Prezel bought Christmas tree lights for her beautiful tree, so she went to Lowe's because they were having a 35% off sale. If a box of lights were originally marked \$27.00, what will she have to pay after the discount?

Amount of Discount: _____

Sales Price: _____

Find the percent of increase or decrease. Round % to the nearest tenth if necessary. (2 points each)

13. Mr. Huber received a toolbox that his children bought him for Christmas. They went to Lowe's to find the toolbox originally sold for \$79.00, but was on sale for \$55.30 Answer the following.

Increase of Decrease? _____ How Much ? _____

What is the % of increase of decrease? _____

Change the following improper fractions to mixed numbers. (2 points each)

14. $\frac{37}{7} =$

15. $\frac{43}{5} =$

Reduce the following fractions. (2 points each)

15. $\frac{12}{36} =$

16. $\frac{4}{16} =$

Change the following mixed numbers to improper fractions. (2 points each)

17. $3\frac{2}{9} =$

18. $6\frac{5}{11} =$

Multiply the following fractions. Answers must be reduced to lowest terms, but may be left as either improper fractions or mixed numbers. (2 points each)

19. $\frac{1}{4} \cdot \frac{12}{9} =$

20. $4\frac{2}{5} \cdot \frac{15}{11} =$

21. $20 \cdot \frac{3}{4} =$

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Simplify the following expressions using positive and negative integers. (2 points each)

1. $-15x - 22 + 19 + 23x$

2. $-3(4x - 1) + 3 - 3x$

Use the percent Formula $\frac{\text{is}}{\text{of}} = \frac{\%}{100}$ to solve the following. Round money answers to the nearest cent (hundredth), all others to the nearest tenth. (2 points each)

3. 126 is _____% of 150

4. 28% of 250 is _____

5. 63 is 72% of _____

Solve the following equations. Fraction answers must be reduced to lowest terms, but may be left as either improper fractions or mixed numbers. (3 points each)

6. $10x + 3 = -15$

7. $8x - 8 = 11x - 21$

8. $-4(2x - 3) + 6x = 3(-2x - 7) + 4$

9. $\frac{3x+4}{5} = \frac{5x-4}{3}$

Find the percent of increase or decrease. Round % to the nearest tenth if necessary. (4 points)

10. Amazon.com changed their price for the blu-ray set of Harry Potter movies from \$79.99 to \$69.99 on Black Friday. What was the percent of increase or decrease?

Increase of Decrease? _____ How Much ? _____

What is the % of increase of decrease? _____

Change the following improper fractions to mixed numbers. (2 points each)

11. $\frac{42}{5} =$

12. $\frac{37}{8} =$

Reduce the following fractions. (2 points each)

13. $\frac{14}{20} =$

14. $\frac{5}{20} =$

Change the following mixed numbers to improper fractions. (2 points each)

15. $6\frac{4}{9} =$

16. $9\frac{3}{8} =$

Multiply the following fractions. Fraction answers must be reduced to lowest terms, but may be left as either improper fractions or mixed numbers. (2 points each)

17. $\frac{3}{4} \cdot \frac{14}{9} =$

18. $3\frac{1}{8} \cdot \frac{16}{15} =$

19. $16 \cdot \frac{3}{8} =$

Divide the following fractions. Fraction answers must be reduced to lowest terms, but may be left as either improper fractions or mixed numbers. (2 points each)

20. $\frac{1}{3} \div \frac{4}{21} =$

21. $14 \div \frac{7}{2} =$

22. $2\frac{1}{2} \div 3\frac{3}{4} =$

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Simplify the following expressions using positive and negative integers. (2 points each)

1. $15x - 32 + 14 - 13x$

2. $-4(2x - 5) + 7 - 5x$

Use the percent Formula $\frac{\text{is}}{\text{of}} = \frac{\%}{100}$ to solve the following. Round money answers to the nearest cent (hundredth), all others to the nearest tenth. (2 points each)

3. 75 is _____% of 300

4. 82% of 450 is _____

5. 99 is 55% of _____

Solve the following equations. Fraction answers must be reduced to lowest terms, but may be left as either improper fractions or mixed numbers. (3 points each)

6. $15x + 5 = -26$

7. $3x - 9 = 12x - 32$

8. $-3(4x - 1) + 2x = 4(-3x - 6) + 5$

9. $\frac{2x+3}{4} = \frac{10x-7}{6}$

Find the percent of increase or decrease. Round % to the nearest tenth if necessary. (4 points)

10. Amazon.com changed their price for the Ultimate Collector's Set (Blu-ray) of Twilight movies from \$109.99 to \$79.99 on Black Friday. What was the percent of increase or decrease?

Increase of Decrease? _____ How Much ? _____

What is the % of increase of decrease? _____

Change the following improper fractions to mixed numbers. (2 points each)

11. $\frac{34}{5} =$

12. $\frac{67}{8} =$

Reduce the following fractions. (2 points each)

13. $\frac{16}{24} =$

14. $\frac{6}{30} =$

Change the following mixed numbers to improper fractions. (2 points each)

15. $5\frac{3}{8} =$

16. $4\frac{5}{9} =$

Multiply or divide the following fractions. Answers must be reduced to lowest terms, but may be left as either improper fractions or mixed numbers. (2 points each)

17. $\frac{6}{9} \cdot \frac{12}{18} =$

18. $1\frac{7}{8} \cdot \frac{16}{15} =$

19. $14 \cdot \frac{4}{28} =$

20. $\frac{2}{3} \div \frac{4}{18} =$

21. $12 \div \frac{5}{6} =$

22. $3\frac{2}{5} \div 1\frac{3}{10} =$