

Adding/Subtracting Integers

Find each sum.

$$1) (-12) + 7 = -12 + 7 \\ = \boxed{-5}$$

$$3) (-6) + 12 = -6 + 12 \\ = \boxed{6}$$

$$5) 3 + 4 = \boxed{7}$$

$$7) (-1) + (-46) = -1 - 46 \\ = \boxed{-47}$$

$$9) (-34) + 50 = -34 + 50 \\ = \boxed{16}$$

Find each difference.

$$11) 2 - (-2)$$

$$13) 8 - 7$$

$$15) 11 - 4$$

$$17) 18 - 41$$

$$19) (-1) - (-3)$$

Evaluate each expression.

$$21) (-10) - 47$$

$$23) 13 + (-29)$$

$$25) (-32) - 44$$

$$27) 2 + 15 + 4$$

$$2) (-10) + (-7)$$

$$4) 8 + 7$$

$$6) (-45) + 9$$

$$8) (-30) + 10$$

$$10) 38 + (-5)$$

$$12) (-1) - 10$$

$$14) (-8) - (-6)$$

$$16) 48 - (-31)$$

$$18) (-38) - 30$$

$$20) (-1) - (-40)$$

$$22) (-29) - 29$$

$$24) 38 + 22$$

$$26) (-12) + (-11)$$

$$28) 16 + (-13) + 5$$

Di

Multiplying Integers

Find each product.

$$1) 6 \times -4$$

$$3) 3 \times -4$$

$$5) 5 \times -4$$

$$7) -5 \times 6$$

$$9) -8 \times -2$$

$$11) -7 \times 5$$

$$13) 10 \times 5$$

$$15) -12 \times 7$$

$$17) 9 \times 10 \times 6$$

$$19) 7 \times 9 \times 7$$

$$21) -5 \times -4 \times -10$$

$$23) 8 \times 3 \times 8$$

$$2) 4 \times 2$$

$$4) -6 \times 4$$

$$6) -3 \times 4$$

$$8) -2 \times -1$$

$$10) 11 \times 12$$

$$12) 9 \times -6$$

$$14) 9 \times 2$$

$$16) 8 \times -12$$

$$18) -6 \times -10 \times -8$$

$$20) 6 \times 6 \times -2$$

$$22) 9 \times 9 \times -5$$

$$24) 7 \times 5 \times -5$$

D

Dividing Integers

Find each quotient.

1) $35 \div -5$

2) $-8 \div 4$

3) $-24 \div 4$

4) $-8 \div -2$

5) $8 \div 4$

6) $-24 \div 8$

7) $-21 \div 7$

8) $6 \div -6$

9) $-132 \div -11$

10) $-60 \div -15$

11) $-52 \div -4$

12) $60 \div 12$

13) $6 \div -1$

14) $75 \div 15$

15) $65 \div -13$

16) $12 \div 4$

17) $-168 \div -12$

18) $-8 \div 2$

19) $\frac{-105}{7}$

20) $\frac{-4}{-1}$

21) $\frac{-10}{-2}$

22) $\frac{-144}{12}$

23) $\frac{24}{-12}$

24) $\frac{60}{-15}$

Add/Subtracting Fractions and Mixed Numbers

Evaluate each expression.

1) $\frac{7}{8} - \frac{5}{8}$

2) $\frac{1}{8} + \frac{13}{8}$

3) $\frac{5}{4} + \frac{5}{4}$

4) $\frac{7}{6} - \frac{7}{6}$

5) $\frac{3}{5} + \frac{1}{5}$

6) $\frac{11}{6} + \frac{7}{6}$

7) $\frac{1}{7} + \frac{4}{7}$

8) $\frac{9}{8} - \frac{3}{8}$

9) $\frac{1}{4} + \left(-\frac{11}{7}\right)$

10) $\frac{7}{4} + \left(-\frac{1}{2}\right)$

11) $\frac{1}{3} + \left(-\frac{11}{6}\right)$

12) $\frac{2}{5} - \left(-\frac{11}{7}\right)$

Multiplying/Dividing Fractions and Mixed Numbers

Find each product.

1) $-\frac{5}{4} \cdot \frac{1}{3}$

2) $\frac{8}{7} \cdot \frac{7}{10}$

3) $\frac{4}{9} \cdot \frac{7}{4}$

4) $-\frac{2}{3} \cdot \frac{5}{4}$

5) $-2 \cdot \frac{3}{7}$

6) $-2\frac{2}{3} \cdot 4\frac{1}{10}$

7) $-2\frac{1}{5} \cdot -1\frac{3}{4}$

8) $-1\frac{1}{4} \cdot 9$

9) $-1\frac{5}{7} \cdot -2\frac{1}{2}$

10) $-2\frac{3}{8} \cdot 2\frac{1}{2}$

Find each quotient.

11) $\frac{-1}{5} \div \frac{7}{4}$

12) $\frac{-1}{2} \div \frac{5}{4}$

13) $\frac{-3}{2} \div \frac{-10}{7}$

14) $\frac{1}{2} \div \frac{8}{7}$

15) $\frac{-9}{5} \div 2$

16) $-3\frac{5}{9} \div 3$

17) $-2 \div -3\frac{4}{5}$

18) $\frac{1}{9} \div -1\frac{1}{3}$

19) $1\frac{6}{7} \div 5\frac{3}{4}$

20) $-3\frac{7}{10} \div 2\frac{1}{4}$

Order of Operations

D

Evaluate each expression.

1) $(30 - 3) \div 3$

2) $(21 - 5) \div 8$

13) $9 + 6 \div (8 - 2)$

14) $4(4 \div 2 + 4)$

3) $1 + 7^2$

4) $5 \times 4 - 8$

15) $6 + (5 + 8) \times 4$

16) $6 \times 6 - (7 + 5)$

5) $8 + 6 \times 9$

6) $3 + 17 \times 5$

17) $(9 \times 2) \div (2 + 1)$

18) $2 - (4 + 3 - 6)$

7) $7 + 12 \times 11$

8) $15 + 40 \div 20$

19) $7 \times 7 - (8 - 2)$

20) $9 - 7 - 6 \div 6$

9) $20 + 16 - 15$

10) $19 - 15 - 3$

21) $(4 - 1 + 8 \div 8) \times 5$

22) $(10 \times 2) \div (1 + 1)$

11) $9 \times (3 + 3) \div 6$

12) $(9 + 18 - 3) \div 8$

23) $7 \times 9 - 7 - 3 \times 5$

24) $8 - 1 - (18 - 2) \div 8$

Evaluating Variable Expressions

Date _____

Evaluate each using the values given.

1) $n^2 - m$; use $m = 7$, and $n = 8$

2) $8(x - y)$; use $x = 5$, and $y = 2$

13) $zy + 4y$; use $y = 5$, and $z = 2$

14) $b(a + b) + a$; use $a = 9$, and $b = 4$

3) $yx \div 2$; use $x = 7$, and $y = 2$

4) $m - n \div 4$; use $m = 5$, and $n = 8$

15) $p^2 \div 4 - m$; use $m = 3$, and $p = 4$

16) $x(y \div 3)^2$; use $x = 4$, and $y = 9$

5) $x - y + 6$; use $x = 6$, and $y = 1$

6) $z + x^3$; use $x = 1$, and $z = 19$

17) $4 + m + n - m$; use $m = 4$, and $n = 9$

18) $qp + q - p$; use $p = 7$, and $q = 3$

7) $y + yx$; use $x = 15$, and $y = 8$

8) $q \div 6 + p$; use $p = 10$, and $q = 12$

19) $mn \div 6 + 10$; use $m = 7$, and $n = 6$

20) $h + j(j - h)$; use $h = 2$, and $j = 6$

9) $x + 8 - y$; use $x = 20$, and $y = 17$

10) $15 - (m + p)$; use $m = 3$, and $p = 10$

21) $(b - 1)^2 + a^2$; use $a = 6$, and $b = 1$

22) $y(x - (9 - 4y))$; use $x = 4$, and $y = 2$

11) $10 - x + y \div 2$; use $x = 5$, and $y = 2$

12) $p - 2 + qp$; use $p = 7$, and $q = 4$

23) $x - \left(x - \left(x - y^3 \right) \right)$; use $x = 9$, and $y = 1$

24) $j(h - 9)^2 + 2$; use $h = 9$, and $j = 8$

Proportion Word Problems

Date _____ Period_

Answer each question and round your answer to the nearest whole number.

- 1) If you can buy one can of pineapple chunks for \$2 then how many can you buy with \$10?
- 2) One jar of crushed ginger costs \$2. How many jars can you buy for \$4?
- 3) One cantaloupe costs \$2. How many cantaloupes can you buy for \$6?
- 4) One package of blueberries costs \$3. How many packages of blueberries can you buy for \$9?
- 5) Shawna reduced the size of a rectangle to a height of 2 in. What is the new width if it was originally 24 in wide and 12 in tall?
- 6) Ming was planning a trip to Western Samoa. Before going, she did some research and learned that the exchange rate is 6 Tala for \$2. How many Tala would she get if she exchanged \$6?
- 7) Jasmine bought 32 kiwi fruit for \$16. How many kiwi can Lisa buy if she has \$4?
- 8) If you can buy four bulbs of elephant garlic for \$8 then how many can you buy with \$32?
- 9) One bunch of seedless black grapes costs \$2. How many bunches can you buy for \$20?
- 10) The money used in Jordan is called the Dinar. The exchange rate is \$3 to 2 Dinars. Find how many dollars you would receive if you exchanged 22 Dinars.
- 11) Gabriella bought three cantaloupes for \$7. How many cantaloupes can Shayna buy if she has \$21?
- 12) Jenny was planning a trip to the United Arab Emirates. Before going, she did some research and learned that the exchange rate is 4 Dirhams for every \$1. How many Dirhams would she get if she exchanged \$5?
- 13) Castel bought four bunches of fennel for \$9. How many bunches of fennel can Mofor buy if he has \$18?
- 14) If you can buy one fruit basket for \$30 then how many can you buy with \$60?

Answer each question. Round your answer to the nearest tenth. Round dollar amounts to the nearest cent.

- 15) Asanji took a trip to Mexico. Upon leaving he decided to convert all of his Pesos back into dollars. How many dollars did he receive if he exchanged 42.7 Pesos at a rate of $\$5.30 = 11.1$ Pesos?
- 16) The currency in Argentina is the Peso. The exchange rate is approximately $\$3 = 1$ Peso. At this rate, how many Pesos would you get if you exchanged \$121.10?
- 17) Mary reduced the size of a painting to a width of 3.3 in. What is the new height if it was originally 32.5 in tall and 42.9 in wide?
- 18) Molly bought two heads of cabbage for \$1.80. How many heads of cabbage can Willie buy if he has \$28.80?

Proportions

State if each pair of ratios forms a proportion.

1) $\frac{4}{2}$ and $\frac{20}{6}$

2) $\frac{3}{2}$ and $\frac{18}{8}$

3) $\frac{4}{3}$ and $\frac{16}{12}$

4) $\frac{4}{3}$ and $\frac{8}{6}$

5) $\frac{12}{24}$ and $\frac{3}{4}$

6) $\frac{6}{9}$ and $\frac{2}{3}$

Solve each proportion.

7) $\frac{10}{k} = \frac{8}{4}$

8) $\frac{m}{10} = \frac{10}{3}$

9) $\frac{2}{x} = \frac{7}{9}$

10) $\frac{3}{x} = \frac{7}{10}$

11) $\frac{4}{9} = \frac{2}{x}$

12) $\frac{6}{a} = \frac{3}{8}$

13) $\frac{8n}{8} = \frac{8}{3}$

14) $\frac{7}{9} = \frac{a}{5}$

15) $\frac{p}{8} = \frac{13}{2}$

16) $\frac{3}{13} = \frac{v}{3}$

17) $\frac{10}{12} = \frac{2}{n}$

18) $\frac{11}{10} = \frac{r}{11}$

19) $\frac{x}{9} = \frac{7}{14}$

20) $\frac{a}{10} = \frac{11}{14}$

21) $\frac{v}{12} = \frac{10}{2}$

22) $\frac{6}{14} = \frac{5}{n}$

Markup, Discount, and Tax (Harder)

Date _____

Find the selling price of each item.

- | | | | |
|--|---|--|--|
| 1) Cost of shoes: \$29.95
Markup: 20%
Tax: 2% | 2) Cost of a microscope: \$269.95
Markup: 43%
Tax: 5% | 9) Original price of a microphone: \$20.00
Discount: 42%
Tax: 6% | 10) Original price of a jacket: \$269.50
Discount: 24%
Tax: 6% |
| 3) Cost of a goldfish: \$3.45
Markup: 29%
Tax: 2% | 4) Cost of shoes: \$99.99
Markup: 9%
Tax: 4% | 11) Original price of a lizard: \$39.99
Discount: 40%
Tax: 6% | 12) Original price of a microphone: \$49.99
Discount: 5%
Tax: 5% |
| 5) Cost of a shirt: \$14.95
Markup: 25%
Discount: 45% | 6) Cost of a CD: \$23.50
Markup: 63%
Discount: 50% | 13) Cost of a hat: \$10.50
Markup: 10%
Discount: 40%
Tax: 5% | 14) Cost of a pen: \$1.95
Markup: 70%
Discount: 40%
Tax: 5% |
| 7) Cost of a puppy: \$349.99
Markup: 41%
Discount: 23% | 8) Cost of an oil change: \$19.95
Markup: 85%
Discount: 48% | 15) Cost of a computer game: \$4.99
Markup: 40%
Discount: 55%
Tax: 1% | 16) Cost of a hat: \$31.50
Markup: 35%
Discount: 30%
Tax: 1% |

Fractions, Decimals, and Percents

Write each as a decimal. Round to the thousandths place.

- | | |
|-----------|---------|
| 1) 90% | 2) 30% |
| 3) 115.9% | 4) 9% |
| 5) 7% | 6) 65% |
| 7) 0.3% | 8) 445% |

Write each as a percent. Round to the nearest tenth of a percent.

- | | |
|-----------|-----------|
| 9) 0.452 | 10) 0.006 |
| 11) 0.002 | 12) 0.05 |
| 13) 4.78 | 14) 0.1 |
| 15) 3.63 | 16) 0.03 |

Write each as a fraction.

- | | |
|---------|---------|
| 17) 25% | 18) 70% |
|---------|---------|

19) 93%

20) 58%

21) 50%

22) $66.\overline{6}\%$

23) 20%

24) 80%

25) 71%

26) 30%

Write each as a percent. Use repeating decimals when necessary.

27) $\frac{1}{2}$

28) $\frac{1}{8}$

29) $\frac{2}{3}$

30) $\frac{1}{100}$

31) $2\frac{1}{10}$

32) $\frac{3}{8}$

33) $\frac{1}{10}$

34) $\frac{87}{100}$