

Dear Students and Parents,

One of the best determiners of how you will do in future math classes is how able you are to memorize, understand, and apply the rules for adding, subtracting, multiplying, and dividing integers. This summer packet is going to help you master this skill.

The summer math packet consists of two portions, integer rule and pre-course assessment problems.

This summer we would like you to memorize and be able to use the integer rules so they come naturally. For some students, these rules may be a review. For others, you will need to take a lot of time to master these rules. We will expect you to turn in the attached worksheets on the first day of school. The assignment will be graded for completion. The first week of school, we will have a quiz on integers, so you can show us your skills! Taking time to practice this during the summer will help make math much easier during the year.

In addition to the integer rules, a set of pre-course assessment problems are included in the back of the packet. We ask you to complete 8 problems a week of the assessment problems until it is complete.

Please follow these directions:

### **Integer Pages**

Do the math pages in order. Do NOT use your calculator. If answers are provided, check them before going onto the next sheet. Make corrections. Once you have finished, go on to the next sheet. Be able to explain the rules for addition, subtraction, multiplication and division by the time you return to school. You will have a quiz on the first week back. Show us your expertise!

### **Pre-Course Test Pages**

Complete 8 problems a week. Do NOT use calculators. Show your work, attach additional sheets if needed for work. Check your answers against the answer key. Make corrections.

Have a wonderful summer. We look forward to getting to know you in the Fall.

Sincerely,

The Pre-Algebra Team

Optional Resources:

**Adding and Subtracting Integers** (Each of these videos are good, but they are different approaches. See which one helps you.):

Video 1: [https://www.youtube.com/watch?v=\\_BgblvF90UE&t=518s](https://www.youtube.com/watch?v=_BgblvF90UE&t=518s)

Video 2: <https://www.youtube.com/watch?v=Nz8ABl6kU9I>

Video 3: <https://www.youtube.com/watch?v=DBSviXhkubg>

**Multiplying and Dividing Integers:**

Video 1: [https://www.youtube.com/watch?v=K\\_tPbVPfHgk](https://www.youtube.com/watch?v=K_tPbVPfHgk)

Video 2: <https://www.youtube.com/watch?v=b5rK3XzHhTM>

**Song to help you memorize the rules:**

Song to Mary Had a Little Lamb (with some electric guitar)

<https://www.youtube.com/watch?v=qRkukBGsxAI>

**Extra Practice Problems (Use A – H)**     [https://www.math-drills.com/integers/integers\\_all\\_operations\\_1212\\_ap\\_001.php](https://www.math-drills.com/integers/integers_all_operations_1212_ap_001.php)

## Adding Integers (I)

Use an integer strategy to find each answer.

$$(-6) + (-18) =$$

$$(+15) + (+7) =$$

$$(-7) + (-11) =$$

$$(-17) + (+16) =$$

$$(-22) + (+14) =$$

$$(+3) + (-17) =$$

$$(-5) + (-9) =$$

$$(-15) + (+13) =$$

$$(-25) + (-18) =$$

$$(-5) + (-21) =$$

$$(-12) + (-7) =$$

$$(+15) + (+14) =$$

$$(-6) + (-2) =$$

$$(+20) + (+18) =$$

$$(-6) + (+14) =$$

$$(-18) + (-6) =$$

$$(-1) + (+15) =$$

$$(+24) + (-5) =$$

$$(-8) + (+6) =$$

$$(+2) + (-5) =$$

$$(+4) + (-20) =$$

$$(+21) + (+3) =$$

$$(+24) + (-4) =$$

$$(+4) + (+11) =$$

$$(+21) + (-12) =$$

$$(+7) + (+1) =$$

$$(+17) + (+1) =$$

$$(+25) + (-8) =$$

$$(-9) + (-6) =$$

$$(+1) + (+10) =$$

## Adding Integers (I) Answers

Use an integer strategy to find each answer.

$$\begin{aligned}(-6) + (-18) &= \\ &= (-24)\end{aligned}$$

$$\begin{aligned}(+15) + (+7) &= \\ &= (+22)\end{aligned}$$

$$\begin{aligned}(-7) + (-11) &= \\ &= (-18)\end{aligned}$$

$$\begin{aligned}(-17) + (+16) &= \\ &= (-1)\end{aligned}$$

$$\begin{aligned}(-22) + (+14) &= \\ &= (-8)\end{aligned}$$

$$\begin{aligned}(+3) + (-17) &= \\ &= (-14)\end{aligned}$$

$$\begin{aligned}(-5) + (-9) &= \\ &= (-14)\end{aligned}$$

$$\begin{aligned}(-15) + (+13) &= \\ &= (-2)\end{aligned}$$

$$\begin{aligned}(-25) + (-18) &= \\ &= (-43)\end{aligned}$$

$$\begin{aligned}(-5) + (-21) &= \\ &= (-26)\end{aligned}$$

$$\begin{aligned}(-12) + (-7) &= \\ &= (-19)\end{aligned}$$

$$\begin{aligned}(+15) + (+14) &= \\ &= (+29)\end{aligned}$$

$$\begin{aligned}(-6) + (-2) &= \\ &= (-8)\end{aligned}$$

$$\begin{aligned}(+20) + (+18) &= \\ &= (+38)\end{aligned}$$

$$\begin{aligned}(-6) + (+14) &= \\ &= (+8)\end{aligned}$$

$$\begin{aligned}(-18) + (-6) &= \\ &= (-24)\end{aligned}$$

$$\begin{aligned}(-1) + (+15) &= \\ &= (+14)\end{aligned}$$

$$\begin{aligned}(+24) + (-5) &= \\ &= (+19)\end{aligned}$$

$$\begin{aligned}(-8) + (+6) &= \\ &= (-2)\end{aligned}$$

$$\begin{aligned}(+2) + (-5) &= \\ &= (-3)\end{aligned}$$

$$\begin{aligned}(+4) + (-20) &= \\ &= (-16)\end{aligned}$$

$$\begin{aligned}(+21) + (+3) &= \\ &= (+24)\end{aligned}$$

$$\begin{aligned}(+24) + (-4) &= \\ &= (+20)\end{aligned}$$

$$\begin{aligned}(+4) + (+11) &= \\ &= (+15)\end{aligned}$$

$$\begin{aligned}(+21) + (-12) &= \\ &= (+9)\end{aligned}$$

$$\begin{aligned}(+7) + (+1) &= \\ &= (+8)\end{aligned}$$

$$\begin{aligned}(+17) + (+1) &= \\ &= (+18)\end{aligned}$$

$$\begin{aligned}(+25) + (-8) &= \\ &= (+17)\end{aligned}$$

$$\begin{aligned}(-9) + (-6) &= \\ &= (-15)\end{aligned}$$

$$\begin{aligned}(+1) + (+10) &= \\ &= (+11)\end{aligned}$$

## Adding Integers (J)

Use an integer strategy to find each answer.

$(+22) + (+4) =$

$(+7) + (+23) =$

$(+20) + (+1) =$

$(-12) + (-7) =$

$(+19) + (-4) =$

$(-2) + (-5) =$

$(+20) + (-17) =$

$(+24) + (-2) =$

$(+3) + (-1) =$

$(-2) + (-11) =$

$(+21) + (+23) =$

$(+14) + (-5) =$

$(-5) + (-5) =$

$(+4) + (+24) =$

$(-11) + (+1) =$

$(-20) + (-19) =$

$(-11) + (+20) =$

$(-6) + (+16) =$

$(+6) + (-18) =$

$(-4) + (-20) =$

$(+25) + (+5) =$

$(-4) + (+10) =$

$(+15) + (+25) =$

$(-10) + (+5) =$

$(-5) + (-17) =$

$(-14) + (-5) =$

$(+12) + (+9) =$

$(+15) + (+14) =$

$(-14) + (+16) =$

$(-5) + (-15) =$

## Subtracting Integers (J)

Use an integer strategy to find each answer.

$(+5) - (-10) =$

$(+10) - (-12) =$

$(-8) - (+20) =$

$(+23) - (-13) =$

$(+24) - (-19) =$

$(-9) - (+16) =$

$(+6) - (+21) =$

$(-25) - (+10) =$

$(+9) - (+14) =$

$(-4) - (+7) =$

$(+11) - (+14) =$

$(+20) - (+18) =$

$(+4) - (-15) =$

$(-21) - (+24) =$

$(-19) - (-18) =$

$(+17) - (+14) =$

$(-6) - (+21) =$

$(+13) - (+4) =$

$(+10) - (+7) =$

$(-1) - (+19) =$

$(-15) - (-1) =$

$(+2) - (-11) =$

$(-11) - (+18) =$

$(-10) - (+11) =$

$(-10) - (+6) =$

$(+24) - (+11) =$

$(+20) - (-25) =$

$(+16) - (+22) =$

$(+4) - (-13) =$

$(+25) - (-4) =$

## Subtracting Integers (J) Answers

Use an integer strategy to find each answer.

$$\begin{aligned} (+5) - (-10) &= \\ &= (+15) \end{aligned}$$

$$\begin{aligned} (+10) - (-12) &= \\ &= (+22) \end{aligned}$$

$$\begin{aligned} (-8) - (+20) &= \\ &= (-28) \end{aligned}$$

$$\begin{aligned} (+23) - (-13) &= \\ &= (+36) \end{aligned}$$

$$\begin{aligned} (+24) - (-19) &= \\ &= (+43) \end{aligned}$$

$$\begin{aligned} (-9) - (+16) &= \\ &= (-25) \end{aligned}$$

$$\begin{aligned} (+6) - (+21) &= \\ &= (-15) \end{aligned}$$

$$\begin{aligned} (-25) - (+10) &= \\ &= (-35) \end{aligned}$$

$$\begin{aligned} (+9) - (+14) &= \\ &= (-5) \end{aligned}$$

$$\begin{aligned} (-4) - (+7) &= \\ &= (-11) \end{aligned}$$

$$\begin{aligned} (+11) - (+14) &= \\ &= (-3) \end{aligned}$$

$$\begin{aligned} (+20) - (+18) &= \\ &= (+2) \end{aligned}$$

$$\begin{aligned} (+4) - (-15) &= \\ &= (+19) \end{aligned}$$

$$\begin{aligned} (-21) - (+24) &= \\ &= (-45) \end{aligned}$$

$$\begin{aligned} (-19) - (-18) &= \\ &= (-1) \end{aligned}$$

$$\begin{aligned} (+17) - (+14) &= \\ &= (+3) \end{aligned}$$

$$\begin{aligned} (-6) - (+21) &= \\ &= (-27) \end{aligned}$$

$$\begin{aligned} (+13) - (+4) &= \\ &= (+9) \end{aligned}$$

$$\begin{aligned} (+10) - (+7) &= \\ &= (+3) \end{aligned}$$

$$\begin{aligned} (-1) - (+19) &= \\ &= (-20) \end{aligned}$$

$$\begin{aligned} (-15) - (-1) &= \\ &= (-14) \end{aligned}$$

$$\begin{aligned} (+2) - (-11) &= \\ &= (+13) \end{aligned}$$

$$\begin{aligned} (-11) - (+18) &= \\ &= (-29) \end{aligned}$$

$$\begin{aligned} (-10) - (+11) &= \\ &= (-21) \end{aligned}$$

$$\begin{aligned} (-10) - (+6) &= \\ &= (-16) \end{aligned}$$

$$\begin{aligned} (+24) - (+11) &= \\ &= (+13) \end{aligned}$$

$$\begin{aligned} (+20) - (-25) &= \\ &= (+45) \end{aligned}$$

$$\begin{aligned} (+16) - (+22) &= \\ &= (-6) \end{aligned}$$

$$\begin{aligned} (+4) - (-13) &= \\ &= (+17) \end{aligned}$$

$$\begin{aligned} (+25) - (-4) &= \\ &= (+29) \end{aligned}$$



## Subtracting Integers (I)

Use an integer strategy to find each answer.

$$(-6) - (-17) =$$

$$(-21) - (-9) =$$

$$(+19) - (+16) =$$

$$(-4) - (+14) =$$

$$(-14) - (-22) =$$

$$(-9) - (-18) =$$

$$(-14) - (-19) =$$

$$(-6) - (-13) =$$

$$(+14) - (+4) =$$

$$(-13) - (+9) =$$

$$(+20) - (-5) =$$

$$(-20) - (-10) =$$

$$(+13) - (-22) =$$

$$(+21) - (+12) =$$

$$(-12) - (+19) =$$

$$(-12) - (+1) =$$

$$(-16) - (+19) =$$

$$(-4) - (+4) =$$

$$(+13) - (+12) =$$

$$(-8) - (-11) =$$

$$(+11) - (-13) =$$

$$(-13) - (+1) =$$

$$(-21) - (-17) =$$

$$(+14) - (-5) =$$

$$(+9) - (+15) =$$

$$(+10) - (-2) =$$

$$(-4) - (-14) =$$

$$(-4) - (+23) =$$

$$(-9) - (-7) =$$

$$(+9) - (+3) =$$

## Multiplying Integers (J)

Find each product.

$10 \times 2 =$

$(-10) \times 0 =$

$8 \times (-4) =$

$6 \times (-2) =$

$(-9) \times 10 =$

$10 \times (-12) =$

$1 \times 11 =$

$4 \times 3 =$

$(-1) \times (-12) =$

$(-2) \times (-1) =$

$7 \times 9 =$

$(-3) \times (-11) =$

$(-4) \times 10 =$

$10 \times (-6) =$

$5 \times (-12) =$

$3 \times 7 =$

$0 \times 4 =$

$11 \times 6 =$

$(-9) \times 0 =$

$5 \times (-8) =$

$(-11) \times 1 =$

$2 \times 9 =$

$(-5) \times 10 =$

$(-8) \times (-7) =$

$5 \times (-4) =$

$(-7) \times 0 =$

$(-11) \times 0 =$

$(-8) \times 5 =$

$(-6) \times (-4) =$

$(-7) \times 3 =$

$9 \times 4 =$

$9 \times 5 =$

$8 \times (-7) =$

$(-9) \times 7 =$

$11 \times (-2) =$

$9 \times 7 =$

$(-7) \times 8 =$

$(-10) \times (-5) =$

$(-6) \times 1 =$

$(-8) \times (-3) =$

$4 \times 10 =$

$9 \times 8 =$

$(-1) \times 1 =$

$(-2) \times 0 =$

$12 \times 3 =$

$(-1) \times (-10) =$

$2 \times 0 =$

$10 \times (-8) =$

$6 \times 10 =$

$12 \times 0 =$

$(-7) \times (-7) =$

$(-12) \times (-8) =$

$6 \times (-7) =$

$(-8) \times 11 =$

$(-2) \times (-9) =$

$7 \times 6 =$

$6 \times 8 =$

$(-12) \times (-9) =$

$8 \times 8 =$

$0 \times (-11) =$

$11 \times (-1) =$

$4 \times (-2) =$

$8 \times 9 =$

$(-10) \times 4 =$

$4 \times 0 =$

$10 \times 12 =$

$(-9) \times 1 =$

$6 \times 2 =$

$(-9) \times 2 =$

$5 \times (-3) =$

$8 \times 3 =$

$8 \times (-9) =$

$5 \times 12 =$

$3 \times (-5) =$

$(-7) \times (-9) =$

$6 \times 11 =$

$(-11) \times 11 =$

$(-4) \times (-2) =$

$(-1) \times 5 =$

$8 \times 6 =$

$1 \times (-12) =$

$(-5) \times 1 =$

$4 \times 4 =$

$4 \times 1 =$

$5 \times 1 =$

$3 \times (-7) =$

$(-8) \times 0 =$

$12 \times 5 =$

$(-10) \times 10 =$

$5 \times (-2) =$

$(-4) \times 9 =$

$(-1) \times 3 =$

$(-3) \times (-3) =$

$(-1) \times (-1) =$

$0 \times 10 =$

$(-10) \times 6 =$

$3 \times 10 =$

$(-1) \times 8 =$

$(-11) \times (-2) =$

$10 \times (-1) =$



# Multiplying Integers (J) Answers

Find each product.

|                            |                            |                          |                          |
|----------------------------|----------------------------|--------------------------|--------------------------|
| $10 \times 2 = 20$         | $(-10) \times 0 = 0$       | $8 \times (-4) = (-32)$  | $6 \times (-2) = (-12)$  |
| $(-9) \times 10 = (-90)$   | $10 \times (-12) = (-120)$ | $1 \times 11 = 11$       | $4 \times 3 = 12$        |
| $(-1) \times (-12) = 12$   | $(-2) \times (-1) = 2$     | $7 \times 9 = 63$        | $(-3) \times (-11) = 33$ |
| $(-4) \times 10 = (-40)$   | $10 \times (-6) = (-60)$   | $5 \times (-12) = (-60)$ | $3 \times 7 = 21$        |
| $0 \times 4 = 0$           | $11 \times 6 = 66$         | $(-9) \times 0 = 0$      | $5 \times (-8) = (-40)$  |
| $(-11) \times 1 = (-11)$   | $2 \times 9 = 18$          | $(-5) \times 10 = (-50)$ | $(-8) \times (-7) = 56$  |
| $5 \times (-4) = (-20)$    | $(-7) \times 0 = 0$        | $(-11) \times 0 = 0$     | $(-8) \times 5 = (-40)$  |
| $(-6) \times (-4) = 24$    | $(-7) \times 3 = (-21)$    | $9 \times 4 = 36$        | $9 \times 5 = 45$        |
| $8 \times (-7) = (-56)$    | $(-9) \times 7 = (-63)$    | $11 \times (-2) = (-22)$ | $9 \times 7 = 63$        |
| $(-7) \times 8 = (-56)$    | $(-10) \times (-5) = 50$   | $(-6) \times 1 = (-6)$   | $(-8) \times (-3) = 24$  |
| $4 \times 10 = 40$         | $9 \times 8 = 72$          | $(-1) \times 1 = (-1)$   | $(-2) \times 0 = 0$      |
| $12 \times 3 = 36$         | $(-1) \times (-10) = 10$   | $2 \times 0 = 0$         | $10 \times (-8) = (-80)$ |
| $6 \times 10 = 60$         | $12 \times 0 = 0$          | $(-7) \times (-7) = 49$  | $(-12) \times (-8) = 96$ |
| $6 \times (-7) = (-42)$    | $(-8) \times 11 = (-88)$   | $(-2) \times (-9) = 18$  | $7 \times 6 = 42$        |
| $6 \times 8 = 48$          | $(-12) \times (-9) = 108$  | $8 \times 8 = 64$        | $0 \times (-11) = 0$     |
| $11 \times (-1) = (-11)$   | $4 \times (-2) = (-8)$     | $8 \times 9 = 72$        | $(-10) \times 4 = (-40)$ |
| $4 \times 0 = 0$           | $10 \times 12 = 120$       | $(-9) \times 1 = (-9)$   | $6 \times 2 = 12$        |
| $(-9) \times 2 = (-18)$    | $5 \times (-3) = (-15)$    | $8 \times 3 = 24$        | $8 \times (-9) = (-72)$  |
| $5 \times 12 = 60$         | $3 \times (-5) = (-15)$    | $(-7) \times (-9) = 63$  | $6 \times 11 = 66$       |
| $(-11) \times 11 = (-121)$ | $(-4) \times (-2) = 8$     | $(-1) \times 5 = (-5)$   | $8 \times 6 = 48$        |
| $1 \times (-12) = (-12)$   | $(-5) \times 1 = (-5)$     | $4 \times 4 = 16$        | $4 \times 1 = 4$         |
| $5 \times 1 = 5$           | $3 \times (-7) = (-21)$    | $(-8) \times 0 = 0$      | $12 \times 5 = 60$       |
| $(-10) \times 10 = (-100)$ | $5 \times (-2) = (-10)$    | $(-4) \times 9 = (-36)$  | $(-1) \times 3 = (-3)$   |
| $(-3) \times (-3) = 9$     | $(-1) \times (-1) = 1$     | $0 \times 10 = 0$        | $(-10) \times 6 = (-60)$ |
| $3 \times 10 = 30$         | $(-1) \times 8 = (-8)$     | $(-11) \times (-2) = 22$ | $10 \times (-1) = (-10)$ |

## Multiplying Integers (I)

Find each product.

|                        |                       |                       |                       |
|------------------------|-----------------------|-----------------------|-----------------------|
| $(-12) \times 5 =$     | $(-12) \times 10 =$   | $(-12) \times 8 =$    | $12 \times (-11) =$   |
| $12 \times (-1) =$     | $(-8) \times (-11) =$ | $2 \times 7 =$        | $9 \times 10 =$       |
| $(-8) \times 9 =$      | $10 \times 9 =$       | $6 \times (-6) =$     | $1 \times 7 =$        |
| $(-4) \times (-1) =$   | $0 \times (-1) =$     | $11 \times (-10) =$   | $(-4) \times 11 =$    |
| $(-6) \times 10 =$     | $12 \times (-9) =$    | $(-8) \times 7 =$     | $(-5) \times (-3) =$  |
| $(-3) \times 2 =$      | $(-8) \times 6 =$     | $(-7) \times (-10) =$ | $(-3) \times 12 =$    |
| $9 \times 0 =$         | $0 \times 5 =$        | $4 \times (-10) =$    | $9 \times (-10) =$    |
| $8 \times (-2) =$      | $(-7) \times 2 =$     | $11 \times 5 =$       | $(-4) \times 7 =$     |
| $(-1) \times (-11) =$  | $(-12) \times (-1) =$ | $(-1) \times 10 =$    | $(-12) \times 0 =$    |
| $7 \times 7 =$         | $(-2) \times 2 =$     | $(-6) \times (-12) =$ | $3 \times 12 =$       |
| $(-11) \times (-11) =$ | $(-2) \times 1 =$     | $(-5) \times (-6) =$  | $(-6) \times 4 =$     |
| $(-4) \times 5 =$      | $4 \times 11 =$       | $0 \times 0 =$        | $6 \times (-1) =$     |
| $(-6) \times 5 =$      | $(-6) \times 11 =$    | $0 \times 9 =$        | $0 \times (-3) =$     |
| $(-9) \times 8 =$      | $0 \times 12 =$       | $1 \times (-9) =$     | $(-2) \times (-10) =$ |
| $3 \times 1 =$         | $(-11) \times (-6) =$ | $(-5) \times 0 =$     | $(-5) \times (-8) =$  |
| $5 \times (-5) =$      | $10 \times (-5) =$    | $(-12) \times 1 =$    | $7 \times 10 =$       |
| $8 \times (-5) =$      | $7 \times 5 =$        | $4 \times 6 =$        | $(-7) \times 9 =$     |
| $(-6) \times 2 =$      | $(-6) \times (-3) =$  | $(-10) \times (-4) =$ | $3 \times (-8) =$     |
| $(-3) \times 7 =$      | $(-6) \times (-9) =$  | $5 \times 8 =$        | $7 \times (-10) =$    |
| $(-12) \times (-2) =$  | $3 \times (-12) =$    | $3 \times (-3) =$     | $6 \times (-9) =$     |
| $(-4) \times 2 =$      | $9 \times (-12) =$    | $(-9) \times 12 =$    | $(-11) \times (-1) =$ |
| $5 \times (-11) =$     | $4 \times (-7) =$     | $3 \times 5 =$        | $(-5) \times 12 =$    |
| $(-6) \times 12 =$     | $(-12) \times (-4) =$ | $(-6) \times 7 =$     | $9 \times (-7) =$     |
| $(-6) \times (-7) =$   | $3 \times 3 =$        | $2 \times 4 =$        | $2 \times 3 =$        |
| $6 \times (-3) =$      | $6 \times (-4) =$     | $(-7) \times 10 =$    | $3 \times 2 =$        |

# Integer Division (A)

Find each quotient.

|                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|
| $4 \div (-2) =$    | $60 \div (-12) =$  | $48 \div (-6) =$   | $70 \div (-7) =$   |
| $144 \div (-12) =$ | $12 \div (-12) =$  | $36 \div (-4) =$   | $108 \div (-12) =$ |
| $81 \div (-9) =$   | $24 \div (-3) =$   | $30 \div (-6) =$   | $90 \div (-9) =$   |
| $12 \div (-2) =$   | $10 \div (-5) =$   | $4 \div (-4) =$    | $63 \div (-9) =$   |
| $30 \div (-10) =$  | $40 \div (-8) =$   | $6 \div (-1) =$    | $56 \div (-8) =$   |
| $70 \div (-10) =$  | $12 \div (-3) =$   | $88 \div (-11) =$  | $77 \div (-11) =$  |
| $10 \div (-2) =$   | $84 \div (-7) =$   | $22 \div (-2) =$   | $15 \div (-3) =$   |
| $72 \div (-9) =$   | $33 \div (-11) =$  | $72 \div (-6) =$   | $35 \div (-5) =$   |
| $55 \div (-5) =$   | $28 \div (-7) =$   | $48 \div (-12) =$  | $18 \div (-2) =$   |
| $66 \div (-11) =$  | $7 \div (-1) =$    | $42 \div (-6) =$   | $132 \div (-12) =$ |
| $15 \div (-5) =$   | $18 \div (-6) =$   | $36 \div (-12) =$  | $20 \div (-5) =$   |
| $20 \div (-4) =$   | $50 \div (-5) =$   | $120 \div (-12) =$ | $66 \div (-6) =$   |
| $8 \div (-2) =$    | $25 \div (-5) =$   | $40 \div (-10) =$  | $63 \div (-7) =$   |
| $24 \div (-2) =$   | $14 \div (-7) =$   | $14 \div (-2) =$   | $6 \div (-6) =$    |
| $120 \div (-10) =$ | $132 \div (-11) =$ | $55 \div (-11) =$  | $11 \div (-11) =$  |
| $96 \div (-12) =$  | $28 \div (-4) =$   | $36 \div (-6) =$   | $84 \div (-12) =$  |
| $40 \div (-5) =$   | $48 \div (-4) =$   | $60 \div (-10) =$  | $80 \div (-8) =$   |
| $90 \div (-10) =$  | $99 \div (-11) =$  | $8 \div (-4) =$    | $44 \div (-11) =$  |
| $2 \div (-2) =$    | $35 \div (-7) =$   | $110 \div (-10) =$ | $10 \div (-10) =$  |
| $88 \div (-8) =$   | $2 \div (-1) =$    | $54 \div (-9) =$   | $32 \div (-4) =$   |
| $40 \div (-4) =$   | $50 \div (-10) =$  | $12 \div (-6) =$   | $108 \div (-9) =$  |
| $6 \div (-2) =$    | $16 \div (-2) =$   | $24 \div (-4) =$   | $99 \div (-9) =$   |
| $45 \div (-5) =$   | $9 \div (-9) =$    | $10 \div (-1) =$   | $48 \div (-8) =$   |
| $7 \div (-7) =$    | $27 \div (-9) =$   | $54 \div (-6) =$   | $6 \div (-3) =$    |
| $20 \div (-2) =$   | $3 \div (-1) =$    | $60 \div (-6) =$   | $30 \div (-5) =$   |



# Integer Division (A) Answers

Find each quotient.

|                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|
| $4 \div (-2) = (-2)$     | $60 \div (-12) = (-5)$   | $48 \div (-6) = (-8)$    | $70 \div (-7) = (-10)$   |
| $144 \div (-12) = (-12)$ | $12 \div (-12) = (-1)$   | $36 \div (-4) = (-9)$    | $108 \div (-12) = (-9)$  |
| $81 \div (-9) = (-9)$    | $24 \div (-3) = (-8)$    | $30 \div (-6) = (-5)$    | $90 \div (-9) = (-10)$   |
| $12 \div (-2) = (-6)$    | $10 \div (-5) = (-2)$    | $4 \div (-4) = (-1)$     | $63 \div (-9) = (-7)$    |
| $30 \div (-10) = (-3)$   | $40 \div (-8) = (-5)$    | $6 \div (-1) = (-6)$     | $56 \div (-8) = (-7)$    |
| $70 \div (-10) = (-7)$   | $12 \div (-3) = (-4)$    | $88 \div (-11) = (-8)$   | $77 \div (-11) = (-7)$   |
| $10 \div (-2) = (-5)$    | $84 \div (-7) = (-12)$   | $22 \div (-2) = (-11)$   | $15 \div (-3) = (-5)$    |
| $72 \div (-9) = (-8)$    | $33 \div (-11) = (-3)$   | $72 \div (-6) = (-12)$   | $35 \div (-5) = (-7)$    |
| $55 \div (-5) = (-11)$   | $28 \div (-7) = (-4)$    | $48 \div (-12) = (-4)$   | $18 \div (-2) = (-9)$    |
| $66 \div (-11) = (-6)$   | $7 \div (-1) = (-7)$     | $42 \div (-6) = (-7)$    | $132 \div (-12) = (-11)$ |
| $15 \div (-5) = (-3)$    | $18 \div (-6) = (-3)$    | $36 \div (-12) = (-3)$   | $20 \div (-5) = (-4)$    |
| $20 \div (-4) = (-5)$    | $50 \div (-5) = (-10)$   | $120 \div (-12) = (-10)$ | $66 \div (-6) = (-11)$   |
| $8 \div (-2) = (-4)$     | $25 \div (-5) = (-5)$    | $40 \div (-10) = (-4)$   | $63 \div (-7) = (-9)$    |
| $24 \div (-2) = (-12)$   | $14 \div (-7) = (-2)$    | $14 \div (-2) = (-7)$    | $6 \div (-6) = (-1)$     |
| $120 \div (-10) = (-12)$ | $132 \div (-11) = (-12)$ | $55 \div (-11) = (-5)$   | $11 \div (-11) = (-1)$   |
| $96 \div (-12) = (-8)$   | $28 \div (-4) = (-7)$    | $36 \div (-6) = (-6)$    | $84 \div (-12) = (-7)$   |
| $40 \div (-5) = (-8)$    | $48 \div (-4) = (-12)$   | $60 \div (-10) = (-6)$   | $80 \div (-8) = (-10)$   |
| $90 \div (-10) = (-9)$   | $99 \div (-11) = (-9)$   | $8 \div (-4) = (-2)$     | $44 \div (-11) = (-4)$   |
| $2 \div (-2) = (-1)$     | $35 \div (-7) = (-5)$    | $110 \div (-10) = (-11)$ | $10 \div (-10) = (-1)$   |
| $88 \div (-8) = (-11)$   | $2 \div (-1) = (-2)$     | $54 \div (-9) = (-6)$    | $32 \div (-4) = (-8)$    |
| $40 \div (-4) = (-10)$   | $50 \div (-10) = (-5)$   | $12 \div (-6) = (-2)$    | $108 \div (-9) = (-12)$  |
| $6 \div (-2) = (-3)$     | $16 \div (-2) = (-8)$    | $24 \div (-4) = (-6)$    | $99 \div (-9) = (-11)$   |
| $45 \div (-5) = (-9)$    | $9 \div (-9) = (-1)$     | $10 \div (-1) = (-10)$   | $48 \div (-8) = (-6)$    |
| $7 \div (-7) = (-1)$     | $27 \div (-9) = (-3)$    | $54 \div (-6) = (-9)$    | $6 \div (-3) = (-2)$     |
| $20 \div (-2) = (-10)$   | $3 \div (-1) = (-3)$     | $60 \div (-6) = (-10)$   | $30 \div (-5) = (-6)$    |

## Integer Division (J)

Find each quotient.

|                   |                    |                    |                    |
|-------------------|--------------------|--------------------|--------------------|
| $88 \div (-11) =$ | $88 \div (-8) =$   | $50 \div (-5) =$   | $63 \div (-9) =$   |
| $96 \div (-8) =$  | $14 \div (-7) =$   | $120 \div (-10) =$ | $7 \div (-7) =$    |
| $44 \div (-11) =$ | $77 \div (-7) =$   | $66 \div (-6) =$   | $99 \div (-11) =$  |
| $24 \div (-3) =$  | $9 \div (-1) =$    | $45 \div (-5) =$   | $32 \div (-8) =$   |
| $48 \div (-6) =$  | $55 \div (-11) =$  | $70 \div (-10) =$  | $12 \div (-3) =$   |
| $18 \div (-9) =$  | $72 \div (-8) =$   | $24 \div (-6) =$   | $40 \div (-4) =$   |
| $72 \div (-9) =$  | $36 \div (-3) =$   | $60 \div (-10) =$  | $9 \div (-3) =$    |
| $56 \div (-7) =$  | $1 \div (-1) =$    | $4 \div (-4) =$    | $66 \div (-11) =$  |
| $8 \div (-4) =$   | $90 \div (-10) =$  | $20 \div (-5) =$   | $60 \div (-5) =$   |
| $64 \div (-8) =$  | $70 \div (-7) =$   | $21 \div (-7) =$   | $110 \div (-11) =$ |
| $15 \div (-3) =$  | $108 \div (-12) =$ | $12 \div (-4) =$   | $11 \div (-11) =$  |
| $72 \div (-6) =$  | $33 \div (-11) =$  | $14 \div (-2) =$   | $108 \div (-9) =$  |
| $35 \div (-5) =$  | $20 \div (-4) =$   | $10 \div (-5) =$   | $22 \div (-2) =$   |
| $15 \div (-5) =$  | $18 \div (-3) =$   | $24 \div (-8) =$   | $16 \div (-8) =$   |
| $8 \div (-2) =$   | $6 \div (-2) =$    | $30 \div (-5) =$   | $2 \div (-1) =$    |
| $54 \div (-9) =$  | $110 \div (-10) =$ | $36 \div (-6) =$   | $28 \div (-7) =$   |
| $3 \div (-1) =$   | $60 \div (-12) =$  | $121 \div (-11) =$ | $16 \div (-4) =$   |
| $48 \div (-8) =$  | $44 \div (-4) =$   | $84 \div (-12) =$  | $30 \div (-6) =$   |
| $10 \div (-1) =$  | $40 \div (-10) =$  | $80 \div (-8) =$   | $40 \div (-5) =$   |
| $12 \div (-12) =$ | $55 \div (-5) =$   | $9 \div (-9) =$    | $100 \div (-10) =$ |
| $21 \div (-3) =$  | $54 \div (-6) =$   | $120 \div (-12) =$ | $27 \div (-9) =$   |
| $30 \div (-3) =$  | $7 \div (-1) =$    | $32 \div (-4) =$   | $36 \div (-9) =$   |
| $5 \div (-1) =$   | $4 \div (-1) =$    | $99 \div (-9) =$   | $10 \div (-10) =$  |
| $42 \div (-7) =$  | $50 \div (-10) =$  | $72 \div (-12) =$  | $42 \div (-6) =$   |
| $80 \div (-10) =$ | $48 \div (-12) =$  | $6 \div (-3) =$    | $27 \div (-3) =$   |

# All Operations with Integers (I)

Use an integer strategy to find each answer.

$$(-3) + 12 =$$

$$(-84) \div 12 =$$

$$(-2) - (-12) =$$

$$2 + 1 =$$

$$(-2) \times 5 =$$

$$3 \times (-5) =$$

$$2 - 12 =$$

$$(-11) - 12 =$$

$$(-5) - (-3) =$$

$$(-9) - 4 =$$

$$10 \times 9 =$$

$$(-1) - (-1) =$$

$$(-9) + 8 =$$

$$4 \times 9 =$$

$$12 + 2 =$$

$$(-9) \times 8 =$$

$$(-12) \times (-2) =$$

$$(-24) \div 3 =$$

$$(-3) - (-9) =$$

$$9 \times 7 =$$

$$9 + (-5) =$$

$$8 - (-10) =$$

$$8 \times 1 =$$

$$(-9) + (-6) =$$

$$(-32) \div 4 =$$

$$(-11) \times 4 =$$

$$24 \div (-6) =$$

$$(-7) \times 4 =$$

$$4 + (-4) =$$

$$(-5) - 11 =$$



## All Operations with Integers (J)

Use an integer strategy to find each answer.

$6 \div 2 =$

$(-1) + 9 =$

$(-9) \times 10 =$

$(-8) + 2 =$

$(-88) \div (-11) =$

$8 \times 10 =$

$(-10) - (-7) =$

$5 + (-8) =$

$(-9) \times 6 =$

$(-2) + (-4) =$

$(-11) + (-9) =$

$(-10) + (-6) =$

$(-12) + 7 =$

$6 \times 9 =$

$2 - (-6) =$

$9 - 11 =$

$8 \times (-10) =$

$(-2) + 3 =$

$12 \times (-6) =$

$(-11) + 4 =$

$(-8) - (-4) =$

$4 - 5 =$

$11 \div 11 =$

$(-32) \div 8 =$

$24 \div (-4) =$

$3 + 11 =$

$3 \times (-7) =$

$9 \times 9 =$

$7 \times 6 =$

$3 + 1 =$



# Do 8 problems a day!

## Pre-Course Test (at least)

For use before Chapter 1

Give the place value of the underlined digit. Then round the number to that place.

1. 4561.23

2. 875.43

3. 87.344

4. 91.8756

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

Estimate the sum or difference by rounding each number to the place of its leading digit.

5.  $1376 + 7602$

6.  $54,929 - 23,781$

7.  $94,528 - 45,095$

8.  $580,349 + 290,111$

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

Find a low estimate and a high estimate for the product or quotient.

9.  $238 \times 87$

10.  $875 \times 482$

11.  $6309 \div 53$

12.  $4915 \div 86$

9. \_\_\_\_\_

10. \_\_\_\_\_

Order the numbers from least to greatest.

13. 4.3, 3.4, 4.5, 3.45

14. 0.71, 0.75, 0.7, 0.715

11. \_\_\_\_\_

Perform the indicated operation.

15.  $4.2 + 1.9$

16.  $18.24 + 22.09$

17.  $8.6 - 3.45$

18.  $8.21 - 5.19$

19.  $9.3 \times 0.6$

20.  $15.2 \times 7.1$

21.  $1.5 \div 0.3$

22.  $18.25 \div 7.3$

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

Write the mixed number as an improper fraction.

23.  $5\frac{3}{4}$

24.  $6\frac{4}{13}$

15. \_\_\_\_\_

16. \_\_\_\_\_

Write the improper fraction as a mixed number.

25.  $\frac{23}{6}$

26.  $\frac{27}{11}$

17. \_\_\_\_\_

18. \_\_\_\_\_

19. \_\_\_\_\_

20. \_\_\_\_\_

21. \_\_\_\_\_

22. \_\_\_\_\_

23. \_\_\_\_\_

24. \_\_\_\_\_

25. \_\_\_\_\_

26. \_\_\_\_\_

**Pre-Course Test**

For use before Chapter 1

Continued

Find the sum or difference.

27.  $\frac{3}{7} + \frac{2}{7}$

28.  $\frac{6}{17} + \frac{9}{17}$

29.  $\frac{17}{21} - \frac{7}{21}$

30.  $\frac{16}{29} - \frac{5}{29}$

Find the product.

31.  $8 \times \frac{3}{4}$

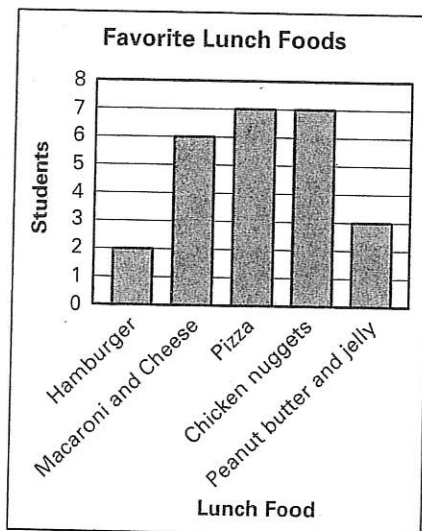
32.  $\frac{5}{6} \times 30$

33.  $4 \times \frac{7}{9}$

34.  $\frac{4}{7} \times 9$

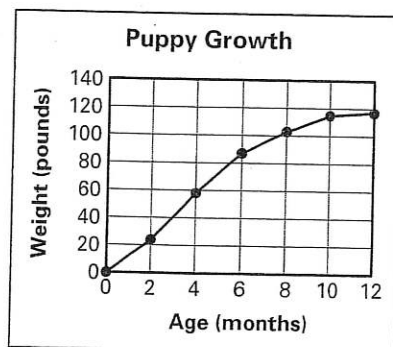
In Exercises 35–37, use the bar graph which shows the results of a survey of 25 students about their favorite lunch food.

35. How many students chose chicken nuggets?
36. Which two foods were chosen by the same number of people?
37. How many more students chose macaroni and cheese than chose hamburger?

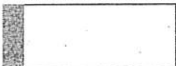


In Exercises 38–40, use the line graph which shows the weight of an Irish wolfhound puppy.

38. What was the weight of the puppy at 8 months?
39. How old was the puppy when it weighed 60 pounds?
40. Between which two ages was the weight increase the greatest? Between which two months was the weight gain the least?

**Answers**

27. \_\_\_\_\_
28. \_\_\_\_\_
29. \_\_\_\_\_
30. \_\_\_\_\_
31. \_\_\_\_\_
32. \_\_\_\_\_
33. \_\_\_\_\_
34. \_\_\_\_\_
35. \_\_\_\_\_
36. \_\_\_\_\_
37. \_\_\_\_\_
38. \_\_\_\_\_
39. \_\_\_\_\_
40. \_\_\_\_\_

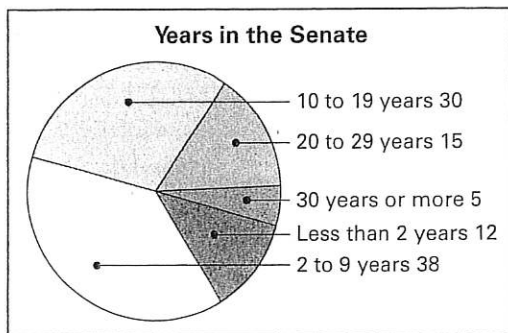


Continued

# Pre-Course Test

For use before Chapter 1

In Exercise 41–43, use the circle graph which shows the number of years that a senator had worked in the U.S. Senate at the start of the 104th Congress.

**Answers**

41. \_\_\_\_\_

42. \_\_\_\_\_

43. \_\_\_\_\_

44. See left.

45. \_\_\_\_\_

41. How many senators had worked in the U.S. Senate for 10 to 19 years?

42. How many senators had worked in the U.S. Senate for 20 years or more?

43. How many senators had worked in the U.S. Senate for 9 years or less?

44. Using the set of whole numbers less than 13, draw a Venn diagram showing set A, which consists of numbers that are multiples of 2, and set B, which consists of numbers that are multiples of 3.

45. Use the Venn diagram from Exercise 44 to determine whether the following statement is true or false.

*There are exactly two whole numbers less than 13 that are multiples of 2 and 3.*

Continued

**Pre-Course Test**

For use before Chapter 1

46. Draw and label a rectangle with a length of 5 centimeters and a width of 3 centimeters.

47. Find the perimeter of the rectangle in Exercise 46.

Copy and complete the statement.

48.  $9 \text{ ft} = \underline{\quad ? \quad} \text{ yd}$

49.  $560 \text{ mm} = \underline{\quad ? \quad} \text{ cm}$

Use a ruler to draw a segment with the given length.

50.  $\frac{5}{8}$  inch

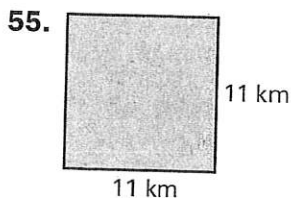
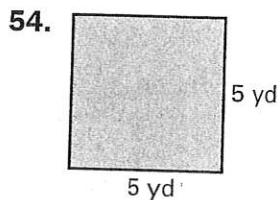
51. 5.3 centimeters

Use a ruler to find the length of the segment in inches and centimeters.

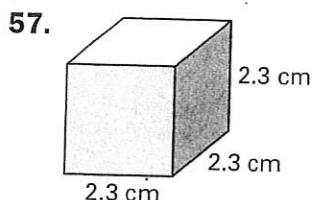
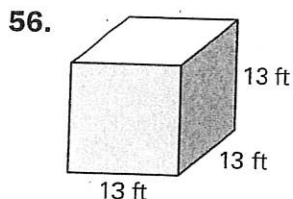
52. \_\_\_\_\_

53. \_\_\_\_\_

Find the area of the square.



Find the volume of the cube.

**Answers**

46. See left.

47. \_\_\_\_\_

48. \_\_\_\_\_

49. \_\_\_\_\_

50. See left.

51. See left.

52. \_\_\_\_\_

53. \_\_\_\_\_

54. \_\_\_\_\_

55. \_\_\_\_\_

56. \_\_\_\_\_

57. \_\_\_\_\_



Continued

**Pre-Course Test**

For use before Chapter 1

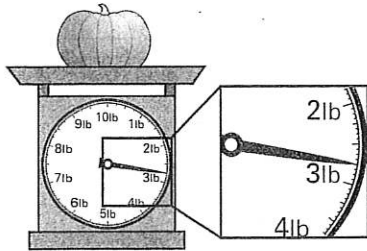
Copy and complete the statement using  $<$ ,  $>$ , or  $=$ .

58. 1.5 tons  $\underline{\quad ? \quad}$  3100 lb

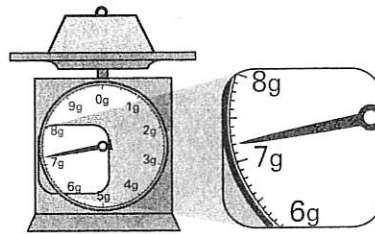
59. 6.7 kg  $\underline{\quad ? \quad}$  6700 g

Find the weight or mass of the object.

60.



61.

Copy and complete the statement using  $<$ ,  $>$ , or  $=$ .

62. 16 fl oz  $\underline{\quad ? \quad}$  2 c

63. 31,150 mL  $\underline{\quad ? \quad}$  3 L

Find the amount of liquid in the measuring cup.

64.

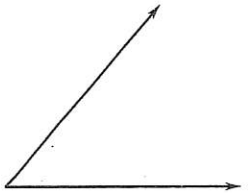


65.

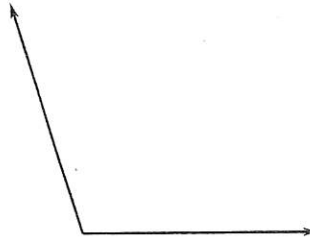


Use a protractor to measure the angle.

66.



67.



Use a protractor to draw an angle that has the given measure.

68.  $168^\circ$

69.  $22^\circ$

**Answers**

58. \_\_\_\_\_

59. \_\_\_\_\_

60. \_\_\_\_\_

61. \_\_\_\_\_

62. \_\_\_\_\_

63. \_\_\_\_\_

64. \_\_\_\_\_

65. \_\_\_\_\_

66. \_\_\_\_\_

67. \_\_\_\_\_

68. See left.

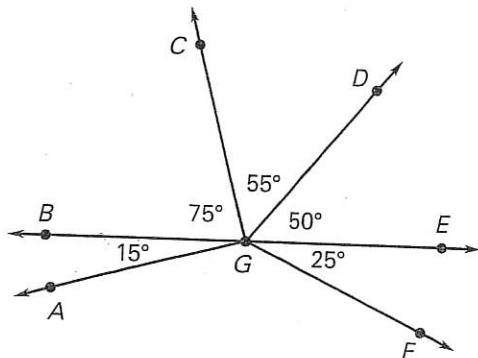
69. See left.

# Pre-Course Test

For use before Chapter 1

Continued

Find the measure of the angle. Then classify the angle as *acute*, *right*, *obtuse*, or *straight*.



Answers

70. \_\_\_\_\_

71. \_\_\_\_\_

72. \_\_\_\_\_

73. \_\_\_\_\_

74. See left.

75. See left.

76. See left.

70.  $m\angle AGC$

71.  $m\angle CGF$

72.  $m\angle DGF$

73.  $m\angle BGE$

Use a compass to draw a circle with the given radius.

74. 0.5 inch

75. 2 cm

76. Use a straightedge and a compass to draw a segment whose length is the sum of the lengths of the two given segments.

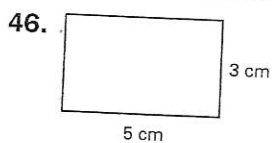
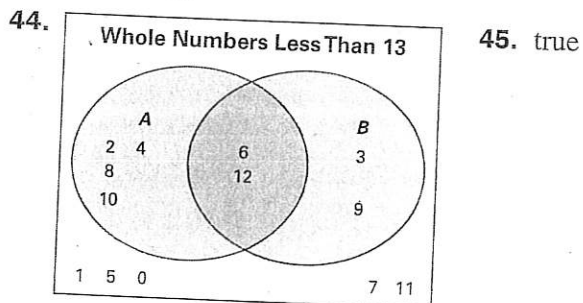
P \_\_\_\_\_ Q

R \_\_\_\_\_ S

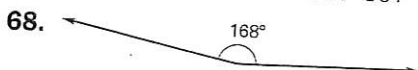
# Answers

## Pre-Course Test

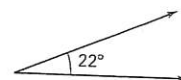
1. hundreds, 500; 4600    2. tens, 70; 880
3. tenths, 0.3; 87.3    4. thousandths, 0.005; 91.876
5. 9000    6. 30,000    7. 40,000
8. 900,000    9-12. Estimates may vary.
9. 16,000; 27,000    10. 320,000; 450,000
11. 100; 130    12. 50; 70    13. 3.4, 3.45, 4.3, 4.5
14. 0.7, 0.71, 0.715, 0.75    15. 6.1    16. 40.33
17. 5.15    18. 3.02    19. 5.58    20. 107.92
21. 5    22. 2.5    23.  $\frac{23}{4}$     24.  $\frac{82}{13}$     25.  $3\frac{5}{6}$
26.  $2\frac{5}{11}$     27.  $\frac{5}{7}$     28.  $\frac{15}{17}$     29.  $\frac{10}{21}$     30.  $\frac{11}{29}$
31. 6    32. 25    33.  $3\frac{1}{9}$     34.  $5\frac{1}{7}$
35. 7 students    36. pizza and chicken nuggets
37. 4 students    38. about 105 lb
39. 4 months    40. between 2 months and 4 months; between 10 months and 12 months
41. 30 senators    42. 20 senators
43. 50 senators



47. 16 cm    48. 3 yd    49. 56 cm
50.  $\frac{5}{8}$  in.    51. 5.3 cm
52.  $1\frac{1}{2}$  in., 3.8 cm    53.  $2\frac{1}{5}$  in., 5.6 cm
54. 25 yd<sup>2</sup>    55. 121 km<sup>2</sup>    56. 2197 ft<sup>3</sup>
57. 12.167 cm<sup>3</sup>    58. <    59. =    60.  $2\frac{3}{4}$  lb
61. 7.2 g    62. =    63. >    64.  $1\frac{3}{4}$  c
65. 350 mL    66. 50°    67. 107°

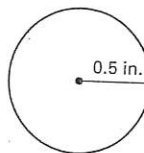


69.

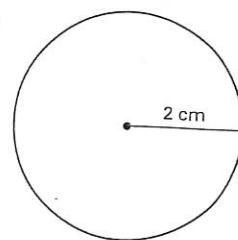


70. 90°; right    71. 130°; obtuse    72. 75°; acute
73. 180°; straight

74.



75.



76.

2.5 in.

