DISTANCE LEARNING PACKET

7TH GRADE
MATH
Find the measure of angle $b$. 

1) $b \quad 51^\circ$

2) $31^\circ$

3) $b \quad 37^\circ$

4) $52^\circ$

Find the value of $x$. 

5) $66^\circ$ 
$(3x + 7)^\circ$

6) $(3x + 6)^\circ$ 
$48^\circ$

7) $(2x + 13)^\circ$ 
$47^\circ$

8) $(5x + 2)^\circ$ 
$3x^\circ$
9) \[ \frac{(2x + 9)^\circ}{(3x + 1)^\circ} \]

10) \[ \frac{53^\circ}{(2x + 11)^\circ} \]

11) \[ \frac{64^\circ}{(2x + 6)^\circ} \]

12) \[ \frac{33^\circ}{(6x + 3)^\circ} \]

13) \[ \frac{(x + 1)^\circ}{(3x + 1)^\circ} \]

14) \[ \frac{63^\circ}{(2x + 3)^\circ} \]

15) \[ \frac{(6x + 4)^\circ}{(4x + 6)^\circ} \]

Find the measure of angle b.

16) b = 117°
Finding Volume Of Rectangular Prisms

Find the volume of each of the rectangular prisms. Measured in cm (not to scale).

1) 6\times 4 \times 3

2) 4\times 6 \times 2

3) 9\times 3 \times 2

4) 9\times 8 \times 6

5) 4\times 3 \times 8

6) 3\times 3 \times 8

7) 8\times 6 \times 5

8) 8\times 3 \times 6

9) 8\times 5 \times 3

10) 3\times 8 \times 9

Answers:

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 

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Circumference and Area of Circles

Find the area of each. Use your calculator's value of \( \pi \). Round your answer to the nearest tenth.

1) \( 12 \text{ in} \)
2) \( 14 \text{ km} \)

3) \( 9 \text{ m} \)
4) \( 11 \text{ cm} \)

5) radius = 2.6 in
6) radius = 34.1 in

7) radius = 13.2 km
8) radius = 29.9 km

Find the circumference of each circle. Use your calculator's value of \( \pi \). Round your answer to the nearest tenth.

9) \( 8 \text{ mi} \)
10) \( 8.3 \text{ yd} \)
11) \[ \text{radius} = 5.2 \text{ ft} \]

12) \[ \text{radius} = 11.1 \text{ ft} \]

13) \[ \text{radius} = 9.5 \text{ in} \]

14) \[ \text{radius} = 9.3 \text{ in} \]

Find the radius of each circle. Use your calculator's value of \( \pi \). Round your answer to the nearest tenth.

15) \[ \text{circumference} = 62.8 \text{ mi} \]

16) \[ \text{circumference} = 69.1 \text{ yd} \]

17) \[ \text{circumference} = 12.6 \text{ yd} \]

18) \[ \text{circumference} = 25.1 \text{ ft} \]

Find the diameter of each circle. Use your calculator's value of \( \pi \). Round your answer to the nearest tenth.

19) \[ \text{area} = 201.1 \text{ in}^2 \]

20) \[ \text{area} = 78.5 \text{ ft}^2 \]

21) \[ \text{area} = 64\pi \text{ mi}^2 \]

22) \[ \text{area} = 16\pi \text{ in}^2 \]

Find the circumference of each circle.

23) \[ \text{circumference} = 6\pi \text{ yd} \]

24) \[ \text{circumference} = 22\pi \text{ in} \]

Find the area of each.

25) \[ \text{circumference} = 6\pi \text{ yd} \]

26) \[ \text{circumference} = 22\pi \text{ in} \]

Critical thinking question:

27) Find the radius of a circle so that its area and circumference have the same value.
Angles in a Triangle

Find the measure of each angle indicated.

1) \(65^\circ\) and \(57^\circ\), find the unknown angle.

2) \(40^\circ\) and \(?\), find the unknown angle.

3) \(20^\circ\) and \(130^\circ\), find the unknown angle.

4) \(85^\circ\) and \(?\), find the unknown angle.

5) \(137^\circ\) and \(102^\circ\), find the unknown angle.

6) \(?\) and \(100^\circ\), find the unknown angle.

7) \(?\) and \(30^\circ\), find the unknown angle.

8) \(155^\circ\) and \(?\), find the unknown angle.
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) 66.6%  

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) \( \frac{87}{100} \)
Multiplying Integers

Find each product.

1) \(6 \times -4\)  
2) \(4 \times 2\)

3) \(3 \times -4\)  
4) \(-6 \times 4\)

5) \(5 \times -4\)  
6) \(-3 \times 4\)

7) \(-5 \times 6\)  
8) \(-2 \times -1\)

9) \(-8 \times -2\)  
10) \(11 \times 12\)

11) \(-7 \times 5\)  
12) \(9 \times -6\)

13) \(10 \times 5\)  
14) \(9 \times 2\)

15) \(-12 \times 7\)  
16) \(8 \times -12\)

17) \(9 \times 10 \times 6\)  
18) \(-6 \times -10 \times -8\)

19) \(7 \times 9 \times 7\)  
20) \(6 \times 6 \times -2\)

21) \(-5 \times -4 \times -10\)  
22) \(9 \times 9 \times -5\)

23) \(8 \times 3 \times 8\)  
24) \(7 \times 5 \times -5\)
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) \(6 ÷ -1\)

14) \(75 ÷ 15\)

15) \(65 ÷ 13\)

16) \(12 ÷ 4\)

17) \(-168 ÷ -12\)

18) \(-8 ÷ 2\)

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

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

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

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

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

24) \(\frac{60}{-15}\)
The Distributive Property

Simplify each expression.

1) $6(1 - 5m)$

2) $-2(1 - 5v)$

3) $3(4 + 3r)$

4) $3(6r + 8)$

5) $4(8n + 2)$

6) $-(-2 - n)$

7) $-6(7k + 11)$

8) $-3(7n + 1)$

9) $-6(1 + 11b)$

10) $-10(a - 5)$

11) $-3(1 + 2v)$

12) $-4(3x + 2)$

13) $(3 - 7k) \cdot -2$

14) $-20(8x + 20)$

15) $(7 + 19b) \cdot -15$

16) $(x + 1) \cdot 14$
Proportion Word Problems

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?
Area of Triangles

Find the area of each.

1) 

\[ \text{Area} = \frac{1}{2} \times \text{base} \times \text{height} \]

\[ \text{Area} = \frac{1}{2} \times 4.5 \text{ mi} \times 8 \text{ mi} \]

2) 

\[ \text{Area} = \frac{1}{2} \times \text{base} \times \text{height} \]

\[ \text{Area} = \frac{1}{2} \times 1.8 \text{ km} \times 5 \text{ km} \]

3) 

\[ \text{Area} = \frac{1}{2} \times \text{base} \times \text{height} \]

\[ \text{Area} = \frac{1}{2} \times 1.5 \text{ in} \times 4 \text{ in} \]

4) 

\[ \text{Area} = \frac{1}{2} \times \text{base} \times \text{height} \]

\[ \text{Area} = \frac{1}{2} \times 2.8 \text{ m} \times 3 \text{ m} \]

5) 

\[ \text{Area} = \frac{1}{2} \times \text{base} \times \text{height} \]

\[ \text{Area} = \frac{1}{2} \times 7 \text{ yd} \times 6.6 \text{ yd} \]

6) 

\[ \text{Area} = \frac{1}{2} \times \text{base} \times \text{height} \]

\[ \text{Area} = \frac{1}{2} \times 4.7 \text{ yd} \times 2 \text{ yd} \]