

1. How many hours and minutes is it from 8:45 p.m. on Monday to 6:35 a.m. on Tuesday?

2. The number of pages in each chapter of a book are listed below.
11, 12, 14, 12, 15, 11, 16, 12, 14, 13, 12, 13, 14
Find the mode and the median of these page counts.

3. A coin is flipped three times. Using H for heads and T for tails, write the sample space for the experiment.

4. If a coin is flipped three times, what is the probability of getting heads at least twice?

5. A 50-question test contains 20 true-or-false questions. The rest are multiple-choice. What is the ratio of true-or-false to multiple-choice questions?

6. The ratio of flour to sugar for the banana bread recipe is 3 to 2. If 3 cups of sugar are used, then how many cups of flour are needed?

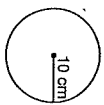
7. Ricardo drove 15 miles in 20 minutes. What was his average rate in miles per hour?

8. Printed on a one-gallon milk bottle was the measure of 3.78 L. About how many liters is a half-gallon of milk?

9. Which quadrilateral does not have rotational symmetry?
A. square
B. rectangle
C. parallelogram
D. trapezoid

discounted all items $\frac{1}{3}$. What is the discount on a \$19.95 item?

For questions 11 and 12, refer to the circle.

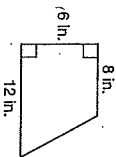


Use 3.14 for π .

11. What is the circumference of the circle?

12. What is the area of the circle?

13. What is the area of this figure?



14. Solve by inverse operations:
 $0.8x = 1.2$

expression.

15. $(-3) - (-2) + (-4)$

16. $(-3)(-4)$
 (-2)


17. $\frac{7}{5} - \frac{3}{4} \cdot \frac{1}{3}$

18. $1^4 + 2^3 + 3^2 + 4^1 + 5^0$

19. $\frac{2,48 - 1}{2(0.2)}$

20. $36x^2y^3$
 $9xy$

<p>1. 8:45 PM to 6:35 AM</p> <p>9:45 = 1hr 10:45 = 2hr 11:45 = 3hr 12:45 = 4hr 1:45 = 5hr 2:45 = 6hr 3:45 = 7hr</p> <p>4:45 = 8hr 5:45 = 9hr 6:45 = 10hr</p> <p>10 hrs - 10 mins = 9 hrs 50 mins</p>	<p>2. <u>13</u></p> <p>Mode = # that occurs most = <u>12</u></p> <p>Median = middle # = <u>13</u></p>	<p>3. <u>HT, HT, HT, TH, TH, TH</u></p> <p>H < T < H H < T < H T < H < T T < H < T</p>	<p>4. Look at answer from #3</p> <p>There are 4 out of 8 with at least two H's.</p> <p>$\frac{4}{8} = \frac{1}{2}$</p>	<p>5. $\frac{20}{30} = \frac{2}{3}$</p> <p>MC</p> <p>50-20 = 30</p>
<p>6. Flour = 3X Sugar = 2X</p> <p>$2 \cdot X = 3 \cdot 3$ $2X = 9$ $9 \div 2 = 4.5$ cups</p>	<p>7. 15 miles in 20 minutes = ? miles in 60 minutes?</p> <p>$\frac{15}{20} = \frac{X}{60}$ $60 \cdot 15 = 20 \cdot X$ $900 = 20 \cdot X$ $900 \div 20 = 45$ miles</p>	<p>8. If 1 gallon = 3.78 liters, then $\frac{1}{2}$ gallon is half of 3.78.</p> <p>$3.78 \div 2 = 1.89$ liters</p>	<p>9. D. (TRAPEZOID)</p> <p>* If the only one that doesn't look the same when you rotate it upside-down.</p>	<p>10. $\frac{1}{3}$ of \$19.95</p> <p>$19.95 \div 3 = \\6.65 $\\$6.65 \times 1 = \\6.65</p>

<p>11. $C = \pi d$ OR $C = 2 \cdot \pi \cdot r$</p> <p>* The 10cm is a radius, so pick the r^2 formula.</p> <p>$C = 2 \cdot \pi \cdot r$ $= 2 \cdot 3.14 \cdot 10 = 62.8 \text{ cm}$</p>	<p>12. Area = πr^2</p> <p>$A = \pi \cdot 10^2$ $A = \pi \cdot 100$ $A = 3.14 \cdot 100 = 314 \text{ cm}^2$</p>	<p>13. </p> <p>* Make it two shapes</p> <p>Rectangle area = $6 \cdot 8 = 48 \text{ in}^2$ Triangle area = $(6 \cdot 4) \div 2 = 12 \text{ in}^2$ Add two areas = $48 + 12 = 60 \text{ in}^2$</p>	<p>14. $0.8x = 1.2$</p> <p>* This is a multiplying equation. I need to do the opposite to solve it. That's dividing!</p> <p>$1.2 \div 0.8 = 1.5$</p>	<p>15. $(-3) - (-2) + (-4)$</p> <p>* Go two numbers at a time. Since its subtracting do L.C.O.</p> <p>$-3 + 2 = -1$ $-1 + (-4) = -5$</p> <p>Signs: diff subtract, same add</p>
<p>16. $(-3)(-4) = 12$</p> <p>Step 1 = Mult. on top Signs Same = positive</p> <p>$\frac{12}{(-2)} = -6$</p> <p>Step 2 = Divide Signs diff = negative</p>	<p>17. $\frac{7}{6} - \frac{3}{4} \cdot \frac{1}{3}$</p> <p>Step 1 = Mult. first</p> <p>$\frac{7}{6} - \frac{3}{4} \cdot \frac{1}{3} = \frac{7}{6} - \frac{1}{4} = \frac{14}{12} - \frac{3}{12} = \frac{11}{12}$</p> <p>Step 2 = Subtract $\frac{7}{6} - 1 = \frac{7}{6} - \frac{6}{6} = \frac{1}{6}$</p>	<p>18. $14 + 3 + 3^2 + 4 + 5$</p> <p>$1 + 8 + 9 + 4 + 1$ $9 + 9 + 4 + 1$ $18 + 4 + 1 = 23$</p>	<p>19. $2 \cdot 48 - 1$</p> <p>Step 1 = Solve top $2 \cdot (0.2)$</p> <p>Step 2 = Solve bottom 1.48</p> <p>Step 3 = Divide $\frac{1.48}{.4} = 3.7$</p>	<p>20. $36x^2y^3$</p> <p>$9x^2y^3$</p> <p>$4x^2y^3$</p> <p>$4x^2y^3$</p> <p>Step 1 = Divide # $(36 \div 9 = 4)$</p> <p>Step 2 = Subtract exponents $(2-1=1)$</p> <p>Step 3 = Subtract exponents $(3-1=2)$</p>