1. (20) One angle of an isosceles triangle is 100°. What is the measure of the other two angles?

2. (17, 25) To the nearest cent, what is the cost of 10.2 gallons of gasoline at $2.189 per gallon?

3. (45) The team's won-lost ratio was 3 to 2. The team played 30 games without a tie. How many games did the team win?

For questions 4 and 5, refer to this information.

A bag contains only red marbles and blue marbles in the ratio of 3 red to 2 blue.

4. (34) If there are 24 red marbles, how many blue marbles are there?

5. (32) If one marble is drawn from the bag, what is the probability that the marble is blue?

6. (Inv. 4) A pyramid with a square base has how many edges?

7. (11, 12) Write 8% as a reduced fraction and as a decimal.

8. (42) What is the volume of a shipping box that is 3 inches by 12 inches by 18 inches?

9. (43) The outside surfaces of a cereal box are printed with text and pictures. What is the print area (surface area) of a box that is 2 inches wide, 7 inches long, and 10 inches tall?

10. (28) The speed of light is about 1.86×10^5 miles per second. Write that number in standard form.

11. (41) Xena says a number, then Yoli says a number that doubles the number.

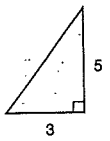
a. Make a table that shows three pairs of numbers Xena and Yoli might say.

b. Write an equation for the function. Start the equation by writing $y =$.

12. (39) About how many inches does a 30-inch diameter tire roll in one turn? (Use 3.14 for π.)

13. (40) A six-foot diameter circular table top has an area of about how many square feet? (Use 3.14 for π.)

14. (16, Inv. 2) Express the length of the hypotenuse of this triangle as an irrational number.



(38)

16. (21, 36) Expand: $-3(x + 2)$

For questions 17–20, simplify the expression.

17. (33, 36) $\dfrac{(-12) - (-3)(4)}{(-3)(-4)}$

18. (21, 31) $\dfrac{-5 + \sqrt{25 - 16}}{2}$

19. (27, 36) $(3x^2y)(2xy)$

20. (13, 22) $\frac{1}{4} + \frac{1}{2} + \frac{5}{6}$

1. Triangles have 180°

180° total
-100° so far
80° left

The two angles are both 40°.

2. Gas costs \$2.189 per gallon. We have 10.2 gallons.

2.189
x 10.2
4378
00000
+21890
\$22.3278

Round to \$22.33

3.

Win	3	?
Loss	2	
total	5	30

$\frac{3}{5} = \frac{x}{30}$

$90 \div 5 = $ 18 games

4.

Red	3	24	
Blue	2	?	← 16
total	5		← 40

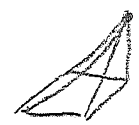
$\frac{3}{2} = \frac{24}{x}$

$48 \div 3 = 16$ blue marbles

5. There are 16 blue, and a total of 40 marbles.

Prob $= \frac{16}{40} \div 8 = \frac{2}{5}$

6.



Edges are "lines". There are 8 edges. 4 make up square. 4 go up to the top of pyramid.

7. 8%

Fraction $= \frac{8}{100} \div 4 = \frac{2}{25}$

Decimal $= 08. = .08$

8. $V = L \cdot W \cdot H$

$V = 3 \cdot 12 \cdot 18$

$V = 648 \text{ in.}^3$

36
x18
288
360
648

9. Surface Area = Add areas of all sides

$2 \cdot 7 = 14$
$2 \cdot 7 = 14$
$7 \cdot 10 = 70$
$7 \cdot 10 = 70$
$2 \cdot 10 = 20$
$2 \cdot 10 = 20$

$14 + 14 + 70 + 70 + 20 + 20 =$

208 in^2

10. 1.86×10^5 → Move decimal 5 to right

1.86000

186,000 miles per

11A.

x	y
1	2
2	4
3	6

11.B. $y = x \cdot 2$

12. $C = \pi \cdot d$ OR $C = 2 \cdot \pi \cdot r$

$C = \pi \cdot 30$

$C = 3.14 \cdot 30$

$C = 94.2$ inches

13. $A = \pi \cdot r^2$

$A = 3.14 \cdot 3^2$

$A = 3.14 \cdot 9$

$A = 28.26 \text{ ft}^2$

14. $a^2 + b^2 = c^2$

$3^2 + 5^2 = c^2$

$9 + 25 = c^2$

$34 = c^2$

$\sqrt{34} = c$

15. $\frac{1}{2} \cdot x = \frac{2}{7}$

Divide $\frac{2}{7} \div \frac{1}{2}$

$\frac{2}{7} \cdot \frac{2}{1} = \frac{4}{7}$

16. $-3(x + 2)$

$(-3 \cdot x) + (-3 \cdot 2)$

$-3x + (-6)$ OR $-3x - 6$

17. $\frac{(-12) - (-3)(4)}{(-3)(-4)} =$

$\frac{(-12) - (-12)}{(12)} = \frac{0}{(12)} = 0$

18. $\frac{-5 + \sqrt{25 - 16}}{2} =$

$\frac{-5 + \sqrt{9}}{2} = \frac{-5 + 3}{2} =$

$-2/2 = -1$

19. $(3x^2y^1) \cdot (2 \cdot x^1y^1) =$

$6x^3y^2$

20. $\frac{1}{4} = \frac{1}{4}$

$+ \frac{1}{2} = \frac{2}{4}$

$\frac{3}{4}$

$\frac{3}{4} = \frac{9}{12}$

$+ \frac{5}{6} = \frac{10}{12}$

$\frac{19}{12}$ OR $1\frac{7}{12}$