Grade 7 : Practice Worksheets
Domain Name : Ratio and Proportion

1. Solve for the unknown to find the unit rate.

$$\frac{1/2}{1/4} = \frac{\square}{1}$$

2. Which of the following ratios are proportional to $60/1$?

Check all that are true.

- ☐ $90/4$
- ☐ $120/2$
- ☐ $30/2$
- ☐ $180/3$
- ☐ $300/5$

3. $$\frac{5}{8} = \frac{x}{\left(\frac{2}{5}\right)}$$

Solve for x.

$x =$ ☐

4. A recipe for cookies calls for $^{3}/_{5}$ of a cup of brown sugar and makes 6 cookies. If you adjust the recipe to make 8 cookies, how much brown sugar will you need?

_____ cups

5. A student expects to raise $60 in a school fundraiser. At the end of the fundraiser he has raised $75. Find the percentage error.

6. If 30 is increased by 20%, what is the new amount?

7. A new basketball is priced at $35 at a sporting goods store. If there is a 9% sales tax, what is the final cost of the basketball?

8. A basketball is priced at $35. If it is on sale for 40% off, what is the final cost?

9. A new basketball is 40% off of its original price and is now selling for $36. What was the original price of the basketball before the sale?

10. An author is having a book signing at a store. He agrees to give 5% of his profit to literacy programs and 15% of his profit to his manager. If he makes a profit of $200.00, how much of his profit does he take home?

Domain Name : The Number System

11. Add.

$-3 + 5 =$ ☐

12. Add:

$8 + (-9) =$ ☐

13. Simplify:

$-1 + (-6) =$ ☐

14. John had $20. He earned $5, spent $10, earned $5 again, and then spent $3. After this series of earnings and expenses, how much money did he owe or have left?

15. You dug a hole that was **8** feet deep. After taking a short break, you dug down **3** more feet in the same hole. When finished digging, a tractor accidentally filled the hole with **4** feet of dirt. How deep is your hole now?

- 7 feet above the ground
- 7 feet below the ground
- 6 feet above the ground
- 6 feet below the ground

16. A car factory is able to produce 120 cars per day. A new technology innovation improves the production by 10%. How many cars can the factory now produce in 5 days?

Domain name : Expressions and Equations

17.

Find the value of the expression.

$x + y + 5$

for $x = 3$ and $y = 4$

18.

The retail price of a suit is *d* dollars. Connor bought the suit with a 15% discount. Which expressions correctly represent the price that Connor paid for the suit?

Check all that are true:

- 1.15d
- d - 15d
- 0.85d
- d - 0.15d
- d + 0.15d

19.

A car factory is able to produce 120 cars per day. A new technology innovation improves the production by 10%. How many cars can the factory now produce in 5 days?

20.

Solve:

$2(23 + a) = 34$

$a =$ ☐

21.

Car rentals involve a $130 flat fee and an additional cost of $31.67 a day. What is the maximum number of days you can rent a car if you have a $500 budget?

Domain Name : Geometry, Probability and Statistics

22. Find the height of the Eiffel Tower from a scale that is 5 inches tall. The scale is 1 inch = 65 meters.

23. Construct a triangle with the following angles: 100°, 40°, and 40°.

24. What is the median for the following scores for Mr. Smith's first test?
55, 42, 78, 99, 69, 83, 74, 83, 97

(Remember to sort the numbers in order to find the median.)

25. You roll a die that is numbered 1 to 6. What is the probability that you will roll a 3 or a 5?

- 5/6
- ½
- 1/6
- 3/6
- 1/3

26. A coin is tossed. What is the theoretical probability of the coin showing heads?

- P(heads) = 5%
- P(heads) = 10%
- P(heads) = 50%
- P(heads) = 100%
- P(heads) = 25%