1. Convert to a percent.
$\frac{2}{5}$
$\frac{2}{5}=$ $\qquad$ \% (Type a whole number or a decimal.)
2. Convert to a percent.

23
$23=$ \%
3. Convert to a percent.
0.391
$0.391=$ $\qquad$ \% (Type a whole number or a decimal.)
4. Convert to a percent.
$\frac{9}{5}$
$\frac{9}{5}=$ $\qquad$ \% (Type a whole number or a decimal.)
5. Convert to a percent.
0.8
$0.8=$ \%
6. Convert to a percent.
$\frac{6}{20}$
$\frac{6}{20}=$ $\qquad$ \% (Type a whole number or a decimal.)
7. Convert to a decimal number.

4\%
$4 \%=$ $\qquad$ (Type a whole number or a decimal.)
8. Convert to a decimal number.

76\%
$76 \%=$ $\qquad$ (Type a whole number or a decimal.)
9. Convert to a decimal number.
$\frac{4}{5} \%$
(Type a whole number or a decimal.)
10. Convert to a decimal number.
$8 \frac{3}{4} \%$
$8 \frac{3}{4} \%=$ $\qquad$ (Type a whole number or a decimal.)
11. Convert to a decimal number.

800\%
$800 \%=$ $\qquad$ (Type a whole number or a decimal.)
12. Convert to a decimal number.
$5.3 \%=$ $\qquad$ (Type a whole number or a decimal.)
13. Rewrite the percent as a fraction in lowest terms.
$35 \%$
$35 \%=$ $\qquad$ (Type a whole number or a simplified fraction.)
14. Rewrite the percent as a fraction in lowest terms.

450\%
$450 \%=$ $\qquad$
15. Rewrite the percent as a fraction in lowest terms.
$45 \%$
$45 \%=$ $\qquad$ (Type a whole number or a simplified fraction.)
16. Rewrite the percent as a fraction in lowest terms.
$85 \%$
$85 \%=$ $\qquad$ (Type a whole number or a simplified fraction.)
17. Rewrite the percent as a fraction in lowest terms.
$18 \%$
$18 \%=$ $\qquad$ (Type a whole number or a simplified fraction.)
18. $40 \%$ of what number is 10 ?

40\% of $\qquad$ is 10.
(Type a whole number or a decimal.)
19. What percent of 54 is 36 ?

$$
\% \text { of } 54 \text { is } 36 .
$$

(Type a whole number, proper fraction, or mixed number.)
20. $7 \frac{1}{2} \%$ of $\$ 290$ is $\qquad$
$7 \frac{1}{2} \%$ of $\$ 290$ is $\$$ $\qquad$ -.
(Type a whole number or a decimal.)
21. $50 \%$ of what number is equal to 29 ?
$50 \%$ of is 29 .
(Type a whole number or a decimal.)
22. $9 \%$ of $\$ 3.24$ is $\qquad$ .
$9 \%$ of $\$ 3.24$ is ¢.
(Round to the nearest cent as needed.)
23. $\frac{3}{4}$ is $\qquad$ percent of 15 .
$\frac{3}{4}$ is $\qquad$ $\%$ of 15 .
(Type a whole number or a decimal.)
24. The weight distribution of a vehicle specifies that the front wheels carry $53 \%$ of the weight. If a certain vehicle weighs 3570 lb , what weight is carried by the front wheels?

The weight carried by the front wheels is lb.
(Round to the nearest whole number as needed.)
25.

A worker earns $\$ 27.50$ per hour. If she receives a $5 \frac{1}{2} \%$ pay raise, what is the amount of her hourly raise?
The amount of her hourly raise is \$
(Round to the nearest cent as needed.)
26. Quality Homes Construction Company orders only lumber that is at least $70 \%$ clear-free of defects, including knots and edge defects. In an order containing 65,700 linear feet, what minimum amount of lumber will be free of defects?

At least $\qquad$ linear feet will be free of defects.
(Type a whole number or a decimal.)
27. An engine supplies 110 hp to an electric generator, and the generator delivers 60 hp of electrical power. What is the efficiency of the generator?

The efficiency of the generator is $\qquad$ \% .
(Type a whole number or an exact decimal. If the decimal does not terminate, round to one decimal place.)
28. A 240 -hp automobile engine delivers only 165 hp to the driving wheels of the car. What is the efficiency of the transmission and drive mechanism?

The efficiency of the transmission and drive mechanism is $\qquad$ \%.
(Type a whole number or an exact decimal. If the decimal does not terminate, round to one decimal place.)
29. Specifications call for a hole in a machined part to be 2.313 in . in diameter. If the hole is measured to be 2.318 in., what is the machinist's percent error?

The machinist's percent error is $\qquad$ \%.
(Type a whole number or an exact decimal. If the decimal does not terminate, round to two decimal places.)
30. Complete the following table.

| Measurement | Tolerance | Percent Tolerance |
| :---: | :---: | :---: |
| 3.424 in. | $\pm 0.002 \mathrm{in}$. | (a) |
| 3.424 in. | $\pm 0.016$ in. | (b) |
| 3.424 in. | (c) | $\pm 0.27 \%$ |

Complete the table below.
(Round the tolerance to three decimal places. Round each percent tolerance to two decimal places.)

|  | Measurement | Tolerance | Percent Tolerance |  |
| :--- | :---: | :--- | :--- | :--- |
| (a) | 3.424 in. | $\pm 0.002 \mathrm{in}$. | $\pm$ | $\%$ |
| (b) | 3.424 in. | $\pm 0.016 \mathrm{in}$. | $\pm$ |  |
| (c) | 3.424 in. | $\pm$ |  | in. |

31. The pressure in a hydraulic line increases from 120 psi to 165 psi. What is the percent increase in pressure?

The percent increase in pressure is $\qquad$ \%.
(Type a whole number or an exact decimal. If the decimal does not terminate, round to one decimal place.)
32. A one-terabyte external hard drive is on sale at a $29 \%$ discount. If the original price was $\$ 349$, what is the sale price?

The sale price is $\$$ $\qquad$ _.
(Type a whole number or an exact decimal. If the decimal does not terminate, round to two decimal places.)
33. A 7 in. medium-angle grinder is on sale for $\$ 89.40$ and is marked as being $40 \%$ off. What was the original list price?

The original list price was \$ $\qquad$ .
(Type a whole number or an exact decimal. If the decimal does not terminate, round to two decimal places.)
34. An electrician purchases some outdoor lighting for a customer at a wholesale price of $\$ 894.60$. The customer would have paid the retail price of $\$ 1260$. What was the wholesale discount?

The wholesale discount was $\qquad$ \%.
(Type a whole number or an exact decimal. If the decimal does not terminate, round to one decimal place.)
35. A patient originally weighing 180 lb took a course of medication with a side effect that caused his weight to increase by $15 \%$.
(a) How much weight did he gain?
(b) What percent of this resulting weight must he now lose in order to return to his original weight?
(a) The patient gained $\qquad$ lb.
(Type a whole number or an exact decimal. If the decimal does not terminate, round to the nearest whole number.)
(b) The patient must now lose $\qquad$ \% of this resulting weight in order to return to his original weight.
(Type a whole number or an exact decimal. If the decimal does not terminate, round to the nearest whole number.)
36. In 1979, ice and snow in an area was reflecting 2.83 watts of solar energy per square meter. By 2008, the amount was 2.38 watts per square meter. By what percent was the reflection reduced over this 29-year period of time?

Over the 29-year period of time the reflection is reduced by $\qquad$ \%. (Round to the nearest tenth as needed.)

3. 39.1
4. 180
5. 80
6. 30
7. 0.04
8. 0.76
9. 0.008
10. 0.0875
11. 8
12. 0.053
13. 7

20
14. $\frac{9}{2}$
15. 9

20
16. 17
17. 9

50
18. 25
19. $66 \frac{2}{3}$
20. 21.75
21. 58
22. 29
23.5
24. 1892
25. 1.51

## 26. 45,990

## 27. 54.5

## 28. 68.75

## 29. 0.22

30. 0.06
0.47
0.009
31. 37.5
32. 247.79
33. 149
34. 29
35. 27

13
36. 15.9

