Name: **School:** **Grade:** **Class:**

7-8 Estimating with Percents - Practice and Problem Solving

Estimate each percent.

9. 21% of 96

Sample answer: 21% rounds to 20% and 96 rounds to 100.

$20\% = \frac{1}{5}$

$\frac{1}{5}$ of 100 is 20

11. 19% of 72

Sample answer: 19% rounds to 20% and 72 rounds to 70.

$20\% = \frac{1}{5}$

$\frac{1}{5}$ of 70 is 14

13. 26% of 125

Sample answer: 26% rounds to 25% and 125 rounds to 120.

$25\% = \frac{1}{4}$

$\frac{1}{4}$ of 120 is 30

15. 79% of 82

Sample answer: 79% rounds to 80% and 82 rounds to 80.

$80\% = \frac{4}{5}$

$\frac{4}{5}$ of 80 is 64

17. 89% of 195

Sample answer: 89% rounds to 90% and 195 rounds to 200.

$90\% = \frac{9}{10}$

$\frac{9}{10}$ of 200 is 180

Name: **School:** **Grade:** **Class:**

19. **RIDES** Trevon spent 8 hours and 15 minutes at an amusement park yesterday. He spent 75% of the time at the park riding rides. About how much time did he spend riding rides?

Sample answer: 8 hours and 15 minutes rounds to 8 hours.

$75\% = \frac{3}{4}$

$\frac{3}{4}$ of 8 hours is 6 hours

21. **POPULATION** About 42% of Alaska's population lives in the city of Anchorage. If Alaska has a total population of 648,818, about how many people live in Anchorage?

Sample answer: 42% rounds to 40% and 648,818 rounds to 650,000.

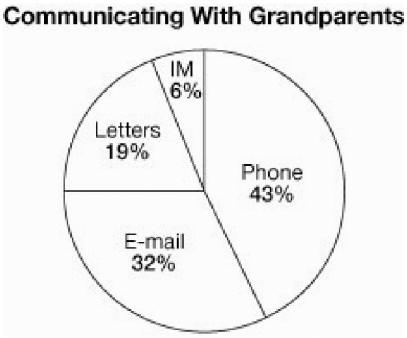
$40\% = \frac{2}{5}$

$\frac{2}{5}$ of 650,000 is 260,000

23. **CIRCLE GRAPHS** A group of students were asked how they most often communicate with their grandparents. Sketch a circle graph of the results shown in the table.

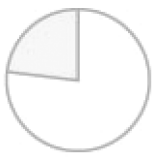
Communicating With Grandparents	
Phone	43%
E-mail	32%
Letters	19%
Instant Messages	6%

Sample graph;



Estimate the percent that is shaded in each figure.

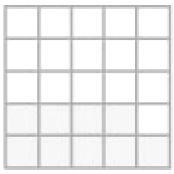
25.



Sample answer: about $\frac{1}{4}$, which is 25%

Name: **School:** **Grade:** **Class:**

27.

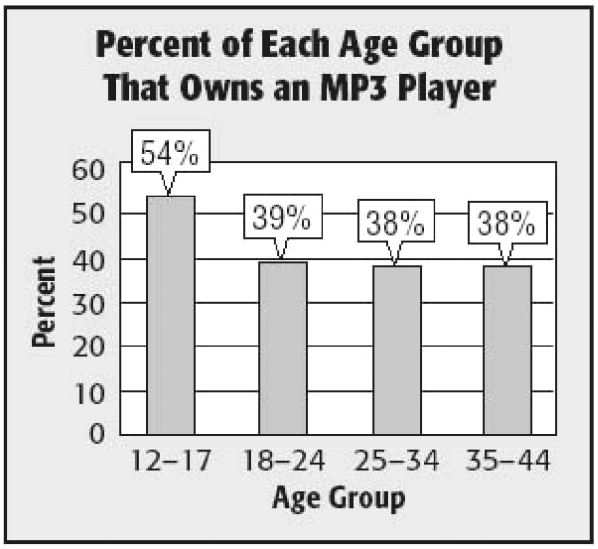


Sample answer: about $\frac{2}{5}$, which is 40%

29. **NUMBER SENSE** Rachel wants to buy a shirt regularly priced at $32. It is on sale for 40% off. Rachel estimates that she will save $\frac{2}{5}$ of $30 or $12. Will the actual amount be more or less than $12? Explain your reasoning.

More; Rachel rounded $32 down to $30, so the actual amount she will save will be more than $12.

31. Refer to the graph. If 4,134 people were surveyed, which equation can be used to estimate the number of 18–24-year-olds that own a portable MP3 player?



Source: Edison Media research

A $\frac{1}{2}$ of 4,000 = 2,000

B $\frac{2}{5}$ of 4,000 = 1,600

C $\frac{1}{3}$ of 4,000 = 1,300

D $\frac{1}{5}$ of 4,000 = 800

$\frac{2}{5} = 40\%$

So, $\frac{2}{5}$ or 1,600 will provide a good estimate.

The correct answer is B.

Name: **School:** **Grade:** **Class:**

33. After a group of 24 parts were tested, 5 were found to be defective. About what percent of the parts tested were defective?

F 5%
G 20%
H 25%
J 33%

$\frac{5}{24}$ is about $\frac{5}{25}$ or $\frac{1}{5}$, or 20%. So, the correct answer is G.

35. **GYMS** Every 12th person entering the gym on Saturday will receive a free T-shirt. How many T-shirts will be given away if 190 people go to the gym on Saturday?

$190 \div 12 = 15.8\overline{3}$
15 complete groups of 12 people enter the gym. So, 15 T-shirts are given away.

Express each decimal as a percent.

37. 0.45

$$0.45 = \frac{45}{100}$$
$$= 45\%$$

39. 0.362

$$0.362 = \frac{36.2}{100}$$
$$= 36.2\%$$