



WORKSHEET 27

Year 6 Mathematics: Fractions, Decimals & Percentages

Percentages of Amounts

Focus: The Common Percentages (50%, 25%, 10%)

Name: _____ Date: _____

Understanding Common Percentages

What does Percent mean?

"Per cent" means "out of 100" (from Latin: per centum)

$$50\% = \frac{50}{100} = \frac{1}{2} \text{ (half)}$$

The Three Magic Percentages:

1. **Finding 50%:** Divide by 2 (find half)

$$50\% \text{ of } 20 = 20 \div 2 = 10$$

2. **Finding 25%:** Divide by 4 (find a quarter)

$$25\% \text{ of } 40 = 40 \div 4 = 10$$

3. **Finding 10%:** Divide by 10

$$10\% \text{ of } 60 = 60 \div 10 = 6$$

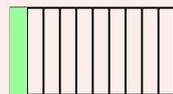
Visual Helper:



50%



25%



10%

Section 1: 50% and 25% (Fluency)



1. Find 50% of 20.

(Hint: 50% means half, so divide by 2)

Answer: _____

2. Find 50% of 100.

Answer: _____

3. Find 25% of 40.

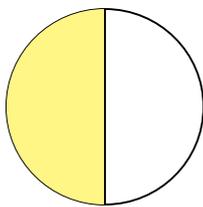
(Hint: 25% means a quarter, so divide by 4)

Answer: _____

4. Find 25% of 80.

Answer: _____

5. Look at this diagram showing 50% shaded:



Circle with 50% shaded

If the whole circle represents 60 students, how many students does the shaded half represent?

Answer: _____



6. Find 50% of \$86.

Answer: _____

PERCENTAGE PRO!



Percent Parrot

What do you call a bird that's good at math?

An owl-gebra expert!

Section 2: The 10% Trick (Reasoning)

7. To find 10%, you divide by 10. Find 10% of 60.

Answer: _____

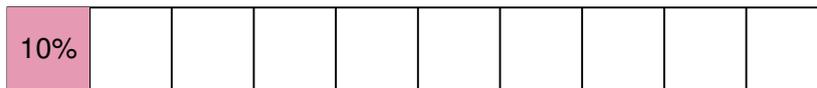
8. Find 10% of 150.

Answer: _____

9. Find 10% of \$250.

Answer: _____

10. Look at this percentage bar:



Each section is 10%

If the whole bar represents 200 points, how many points is one section (10%)?

Answer: _____

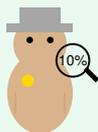
11. Find 10% of 340.

Answer: _____

12. A shop has 90 items. 10% are on sale. How many items are on sale?

Answer: _____

TEN PERCENT CHAMPION!



Discount Detective

Why did the percentage get arrested?

For being over 100 (one-hundred) percent suspicious!

Section 3: Mixing Them Up (Challenge)

13. Which is bigger: 50% of 10 or 10% of 100?

Show your working.



Answer: _____

14. I have 80 marbles. I lose 25% of them. How many marbles do I lose?

Answer: _____

15. A class has 30 students. 50% are girls. How many girls are there?

Answer: _____

16. Find 25% of 120.

Answer: _____

17. A book has 200 pages. Tom has read 10% of it. How many pages has he read?

Answer: _____

18. Challenge: If 50% of a number is 45, what is the number?
(Hint: If half is 45, what is the whole?)

Answer: _____



FULL MARKS!



Happy Pie

What's a pirate's favorite percentage?

Arrr-ound 3.14% (because pi-rates love pi!)

Fantastic Work! Check your answers on the next page.





ANSWER KEY

Worksheet 27: The Common Percentages

Section 1: 50% and 25%

1. 10 (50% of 20 = $20 \div 2 = 10$)
2. 50 (50% of 100 = $100 \div 2 = 50$)
3. 10 (25% of 40 = $40 \div 4 = 10$)
4. 20 (25% of 80 = $80 \div 4 = 20$)
5. 30 students (50% of 60 = $60 \div 2 = 30$)
6. \$43 (50% of \$86 = $\$86 \div 2 = \43)

Section 2: The 10% Trick

7. 6 (10% of 60 = $60 \div 10 = 6$)
8. 15 (10% of 150 = $150 \div 10 = 15$)
9. \$25 (10% of \$250 = $\$250 \div 10 = \25)
10. 20 points (10% of 200 = $200 \div 10 = 20$)
11. 34 (10% of 340 = $340 \div 10 = 34$)
12. 9 items (10% of 90 = $90 \div 10 = 9$)

Section 3: Mixing Them Up

13. They are equal (both equal 10). 50% of 10 = 5; 10% of 100 = 10. Actually 10% of 100 is bigger!
14. 20 marbles (25% of 80 = $80 \div 4 = 20$)
15. 15 girls (50% of 30 = $30 \div 2 = 15$)
16. 30 (25% of 120 = $120 \div 4 = 30$)
17. 20 pages (10% of 200 = $200 \div 10 = 20$)
18. 90 (if half is 45, then the whole is $45 \times 2 = 90$)



WORKSHEET 28

Year 6 Mathematics: Fractions, Decimals & Percentages

Percentages of Amounts

Focus: Building Multiples (20%, 30%, 5%)

Name: _____ Date: _____

Building From 10%

The Power of 10%:

Once you know 10%, you can find ANY percentage!

Finding 20%: Find 10%, then double it

Example: 20% of 50

Step 1: 10% of 50 = 5

Step 2: 20% = 10% \times 2 = 5 \times 2 = 10

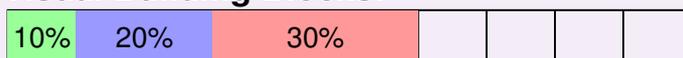
Finding 30%: Find 10%, then times by 3

30% of 40 = (10% of 40) \times 3 = 4 \times 3 = 12

Finding 5%: Find 10%, then halve it

5% of 80 = (10% of 80) \div 2 = 8 \div 2 = 4

Visual Building Blocks:



Section 1: Using 10% to Find 20% and 30% (Fluency)



1. Find 10% of 50. Now double it to find 20% of 50.

Step 1: 10% of 50 = _____

Step 2: 20% of 50 = _____

Answer: _____

2. Find 20% of 80.

(Remember: Find 10% first, then double)

Answer: _____

3. Find 10% of 40. Now times by 3 to find 30% of 40.

Step 1: 10% of 40 = _____

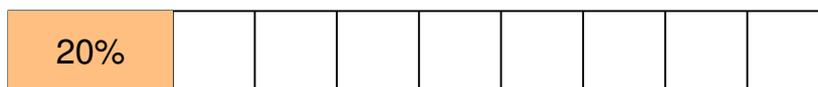
Step 2: 30% of 40 = _____

Answer: _____

4. Find 30% of 60.

Answer: _____

5. Look at this percentage bar showing 20%:



Total = 200

If the whole bar is 200, what is 20%?

Answer: _____



6. Find 20% of \$150.

Answer: _____

BUILDING BLOCK MASTER!



Builder Bear

Why was the equal sign so humble?

Because it knew it wasn't greater than or less than anyone else!

Section 2: Finding 5% (Half of 10%) (Reasoning)

7. 10% of 80 is 8. What is 5% of 80?
(Hint: 5% is half of 10%)

Answer: _____

8. Calculate 5% of 200.

Step 1: Find 10% of 200 = _____

Step 2: Halve it to find 5% = _____

Answer: _____

9. Find 5% of 60.



Answer: _____

10. Find 5% of \$140.

Answer: _____

11. A restaurant bill is \$80. You want to leave a 5% tip. How much is the tip?

Answer: _____

12. Compare: Which is bigger, 5% of 100 or 10% of 40?
Show your working.

Answer: _____

HALF AND HALF HERO!



Split Monkey

What do you call a monkey in a minefield?

A ba-BOOM!

Section 3: Word Problems (Challenge)

13. A computer costs \$500. It is 20% off. How much money do you save?

Answer: _____



14. What is the sale price of the computer in Question 13?
(Hint: Subtract the discount from the original price)

Answer: _____

15. A jar has 200 jellybeans. 30% are red. How many red jellybeans are there?

Answer: _____

16. A school has 400 students. 5% are absent today. How many students are absent?

Answer: _____

17. A shop increases its prices by 10%. If a shirt cost \$40, what is the new price?

Answer: _____

18. Challenge Problem: A bike costs \$300. The price is reduced by 20%, then increased by 10%. What is the final price?
(Work through this step by step!)

Answer: _____



PERCENTAGE GENIUS!

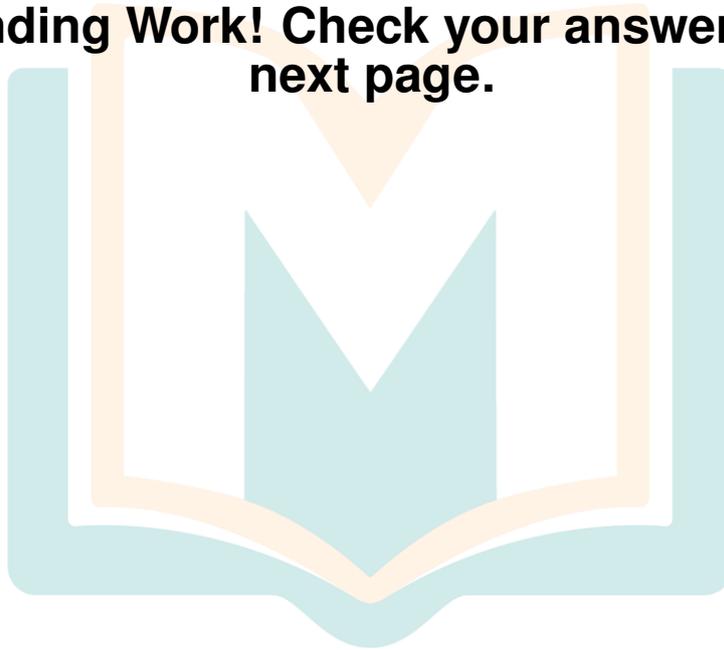


Percent Champion

Why is it dangerous to do math in the jungle?

Because if you add 4 plus 4, you get ate (8)!

Outstanding Work! Check your answers on the next page.





ANSWER KEY

Worksheet 28: Building Multiples

Section 1: Using 10% to Find 20% and 30%

1. Step 1: 5; Step 2: 10 (10% of $50 = 5$; $20\% = 5 \times 2 = 10$)
2. 16 (10% of $80 = 8$; $20\% = 8 \times 2 = 16$)
3. Step 1: 4; Step 2: 12 (10% of $40 = 4$; $30\% = 4 \times 3 = 12$)
4. 18 (10% of $60 = 6$; $30\% = 6 \times 3 = 18$)
5. 40 (10% of $200 = 20$; $20\% = 20 \times 2 = 40$)
6. \$30 (10% of $\$150 = \15 ; $20\% = \$15 \times 2 = \30)

Section 2: Finding 5% (Half of 10%)

7. 4 (5% is half of 10%, so $8 \div 2 = 4$)
8. Step 1: 20; Step 2: 10 (10% of $200 = 20$; $5\% = 20 \div 2 = 10$)
9. 3 (10% of $60 = 6$; $5\% = 6 \div 2 = 3$)
10. \$7 (10% of $\$140 = \14 ; $5\% = \$14 \div 2 = \7)
11. \$4 (10% of $\$80 = \8 ; $5\% = \$8 \div 2 = \4)
12. 5% of $100 = 5$; 10% of $40 = 4$. So 5% of 100 is bigger.

Section 3: Word Problems

13. \$100 saved (10% of $\$500 = \50 ; $20\% = \$50 \times 2 = \100)
14. \$400 (Original price $\$500 - \100 discount = $\$400$)
15. 60 red jellybeans (10% of $200 = 20$; $30\% = 20 \times 3 = 60$)
16. 20 students (10% of $400 = 40$; $5\% = 40 \div 2 = 20$)
17. \$44 (10% of $\$40 = \4 ; New price = $\$40 + \$4 = \$44$)
18. \$264

Step 1: 20% off: 10% of $\$300 = \30 ; $20\% = \$60$; Price after discount = $\$300 - \$60 = \$240$

Step 2: 10% increase: 10% of $\$240 = \24 ; New price = $\$240 + \$24 = \$264$



Phenomenal Achievement!

You've mastered Percentages of Amounts!
From 50% to building any percentage - brilliant
work!

