Tips, Commissions, and Fees

Apply the skill to decisions and designs

Name _____ **Date** _____ **Score** _____ / 8

QUICK REVIEW

A percent tip, commission, or fee is rate times the stated base; a fixed fee is added separately. A 12% fee on 25 dollars is 3 dollars. Add a separate 2 dollar fee to get 5 dollars in total fees.

Worked example

Equipment rental: the base is \$55.00, the percent fee is 10% of base, and a fixed fee is \$2.00. Find the fee total and final payment.

1. Percent amount: $55(10/100) = \frac{11}{2}$ dollars.
2. Total fees: $\frac{11}{2} + 2 = \frac{15}{2}$ dollars.
3. Base plus fees: $55 + \frac{15}{2} = \frac{125}{2}$ dollars.
Answer: Percent amount \$5.50; fees \$7.50, payment \$62.50.

Practice Problems

Show your thinking.

1. Meal tip before tax: plan A charges 15% of \$40.00 plus \$0.00; plan B charges \$8.00. Which fee is cheaper and by how much?

2. Ticket service fee: plan A charges 5% of \$80.00 plus \$3.00; plan B charges \$9.00. Which fee is cheaper and by how much? For plan A, express total payment T as a rule in base payment b.

3. Job A pays \$50.00 plus 4% of \$500.00 sales. Job B pays \$65.00 flat. Which pays more, and by how much?

4. Job A pays \$80.00 plus 3% of \$800.00 sales. Job B pays \$99.00 flat. Which pays more, and by how much? Find the sales needed for a commission alone of 30 dollars.

5. Group meal: plan A charges 20% of \$60.00 plus \$2.00; plan B charges \$16.00. Which fee is cheaper and by how much? Explain why the fixed fee is not multiplied by the tip percent.

6. Booking fee: plan A charges 10% of \$120.00 plus \$5.00; plan B charges \$19.00. Which fee is cheaper and by how much?

7. Online reservation: plan A charges 4% of \$150.00 plus \$3.00; plan B charges \$11.00. Which fee is cheaper and by how much?

8. Job A pays 45 dollars plus 6% of 1200 dollars sales; job B pays 110 dollars. Compare pay and find the gap.

Answer Key

1. Percent amount \$6.00; plan A is cheaper by \$2.00.
2. Percent amount \$4.00; plan A is cheaper by \$2.00. $T = 1.05b + 3$.
3. Job A by \$5.00.
4. Job A by \$5.00. Sales 1000 dollars.
5. Percent amount \$12.00; plan A is cheaper by \$2.00. The stated percent applies to the base only; the fixed fee is separate.
6. Percent amount \$12.00; plan A is cheaper by \$2.00.
7. Percent amount \$6.00; plan A is cheaper by \$2.00.
8. Job A pays 7 dollars more.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. Percent amount: $40(15/100) = 6$ dollars.
2. Total fees: $6 + 0 = 6$ dollars.
3. Plan B costs 8 dollars in fees. B minus A: $8 - (6) = 2$ dollars. Since $6 < 8$, plan A is cheaper by \$2.00.

Problem 2

1. Percent amount: $80(5/100) = 4$ dollars.
2. Total fees: $4 + 3 = 7$ dollars.
3. Plan B costs 9 dollars in fees. B minus A: $9 - (7) = 2$ dollars. Since $7 < 9$, plan A is cheaper by \$2.00.
4. Base plus variable fee plus fixed fee gives $b + 0.05b + 3 = 1.05b + 3$.

Problem 3

1. Commission $= 500(4/100) = 20$ dollars.
2. Pay $= 50 + 20 = 70$ dollars.
3. Job A minus job B pay: $70 - (65) = 5$ dollars. Since $70 > 65$, job A pays \$5.00 more.

Problem 4

1. Commission $= 800(3/100) = 24$ dollars.
2. Pay $= 80 + 24 = 104$ dollars.
3. Job A minus job B pay: $104 - (99) = 5$ dollars. Since $104 > 99$, job A pays \$5.00 more.
4. $0.03s = 30$ gives $s = 30/0.03 = 1000$ dollars.

Problem 5

1. Percent amount: $60(20/100) = 12$ dollars.
2. Total fees: $12 + 2 = 14$ dollars.
3. Plan B costs 16 dollars in fees. B minus A: $16 - (14) = 2$ dollars. Since $14 < 16$, plan A is cheaper by \$2.00.
4. The percent is stated on the 60 dollar base: $60(0.20) = 12$ dollars. Using the fixed fee in that base would instead give $(60 + 2)(0.20) = 12.40$ dollars, changing the stated rule.

Problem 6

1. Percent amount: $120(10/100) = 12$ dollars.
2. Total fees: $12 + 5 = 17$ dollars.
3. Plan B costs 19 dollars in fees. B minus A: $19 - (17) = 2$ dollars. Since $17 < 19$, plan A is cheaper by \$2.00.

Problem 7

1. Percent amount: $150(4/100) = 6$ dollars.
2. Total fees: $6 + 3 = 9$ dollars.
3. Plan B costs 11 dollars in fees. B minus A: $11 - (9) = 2$ dollars. Since $9 < 11$, plan A is cheaper by \$2.00.

Problem 8

1. Commission $1200(0.06) = 72$ dollars.
2. Base plus commission $45 + 72 = 117$ dollars.
3. A minus B pay $117 - 110 = 7$ dollars, so A pays 7 dollars more.

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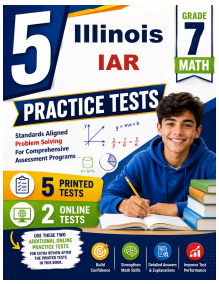

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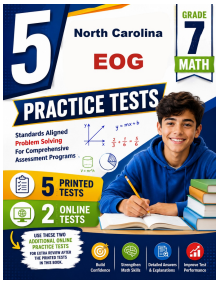

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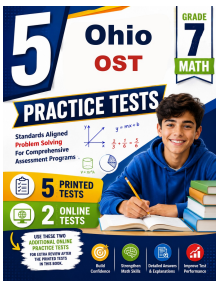

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