Linear Relations - Word Problems

Match each word problem to the corresponding expression

a) _____ x+12   1. The music festival was 7 times bigger than last year
b) _____ 10-x   2. x amount of cookies split between 3 people
c) _____ x/3   3. A worker earns $9 for every hour they work
d) _____ 2x+3   4. Tom gives away half his apples and then buys one more
e) _____ 9x   5. Jacob shared x amount of stickers between his four friends
f) _____ x-9   6. Josh triples his money then buy a $1 treat
g) _____ x/2+1   7. A store has 8 cakes and bakes x amount more
h) _____ 3x-1   8. Lisa doubles her money and then finds 3 dollars on the ground
i) _____ 7x   9. Sarah had 10 candies and she gave x amount away
j) _____ 3+x   10. A store had 9 socks and sold x amount
k) _____ x/4   11. Sam has x amount of cookies and gives 9 away
l) _____ 9-x   12. Sally has x amount of marbles and gets 3 more from friends

Write an equation and solve each word problem and show your steps.

1) Emily is renting a bike for a one-time fee of $25 and then $15 per day.
    a) What is the relation (equation)?

    b) What is the total cost if Emily rents for 4 days?

2) A company needs to lay off a quarter of its workers.
    a) What is the relation (equation)?

    b) How many workers will be left if there were originally 76 workers?

3) Josh is subscribing to a magazine that has a one-time registration fee of $18 and a monthly subscription cost of $12.
    a) What is the relation (equation)?

    b) What is the total cost if Josh subscribes for 3 months?'

4) If the temperature is at 20 degrees celsius and is decreasing by 2 degrees every hour.
    a) What is the relation (equation)?

    b) What will be the temperature after 12 hours?

Extending question

5)Mark is ordering pizza for a party. The delivery fee is $10, and each pizza costs $15. If Mark has $175 how many pizzas can he order?