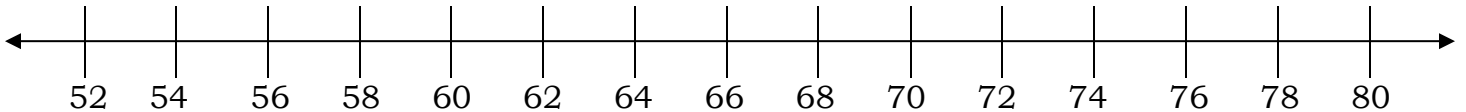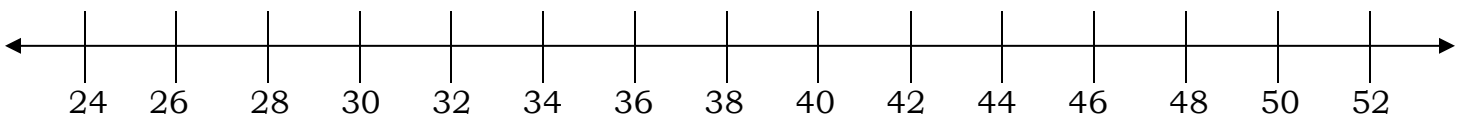# Find the Missing Value When Given the Mean

1. If you need a final average (mean) of 65, and your first 3 quarter grades are 74, 52, and 64, what does your final quarter grade have to be to pass?

```
<-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---->
     52   54   56   58   60   62   64   66   68   70   72   74   76   78   80
```

2. The mean weight of 6 neighborhood dogs is 38 pounds. If five of the dogs weigh 30 lbs, 45 lbs, 39 lbs, 28 lbs, and 40 lbs each, what is the weight of the sixth dog?

```
<-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---->
     24   26   28   30   32   34   36   38   40   42   44   46   48   50   52
```

3. On his first 5 biology tests, Bob received the following scores: **72, 86, 92, 63,** and **77**. What test score must Bob earn on his sixth test so that his mean score for all six tests will be 80?
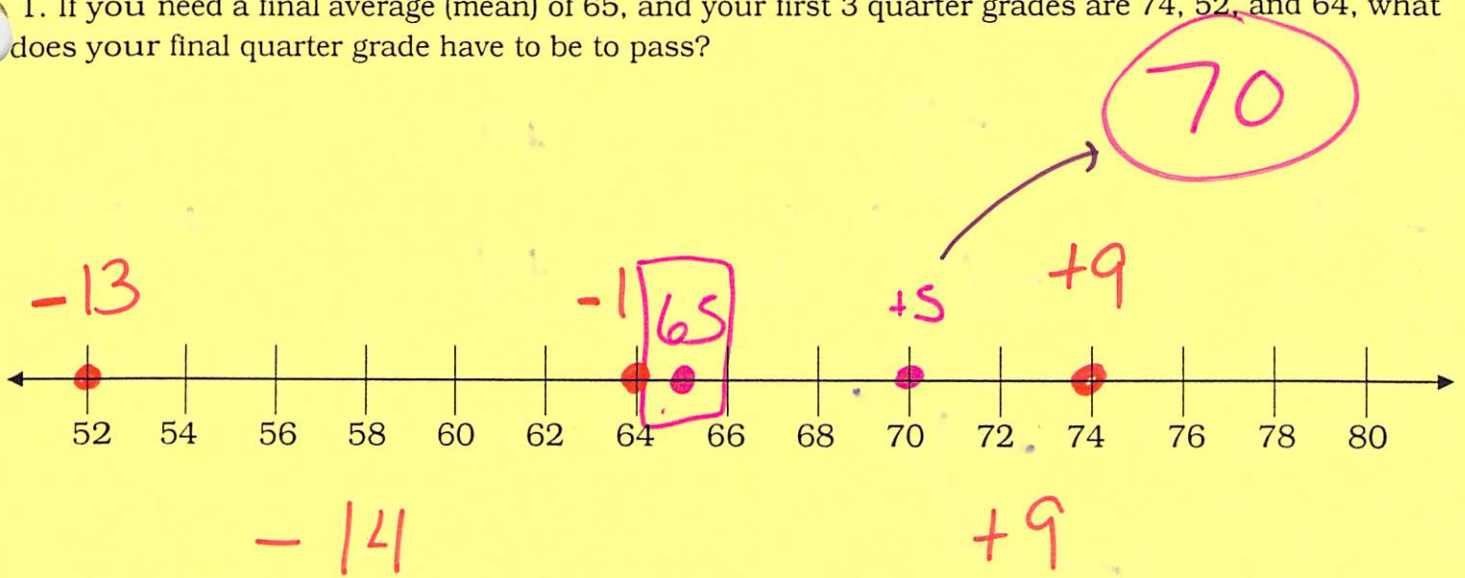
4. The students in Woodland High School's meteorology class measured the noon temperature every school day for a week. Their readings for the first 4 days were Monday, 56°; Tuesday, 72°; Wednesday, 67°; and Thursday, 61°. If the mean temperature for the 5 days was exactly 63°, what was the temperature on Friday?

5. On the first six tests in her social studies course, Jerelyn's scores were 92, 78, 86, 92, 95, and 91. Determine the median and the mode of her scores.
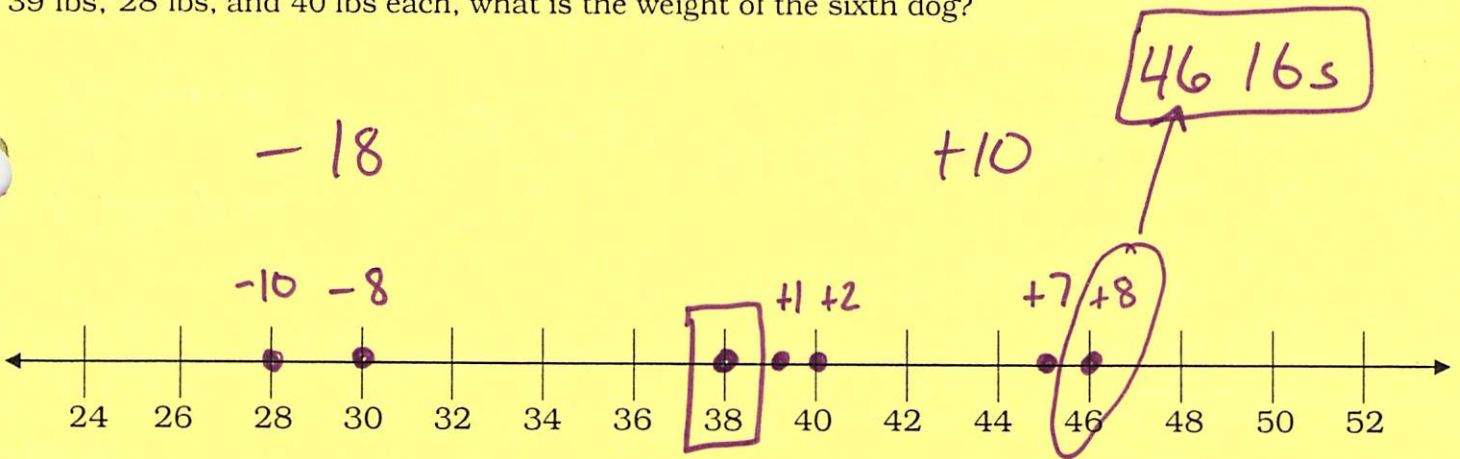
If Jerelyn took a seventh test and raised the mean of her scores *exactly* 1 point, what was her score on the seventh test?
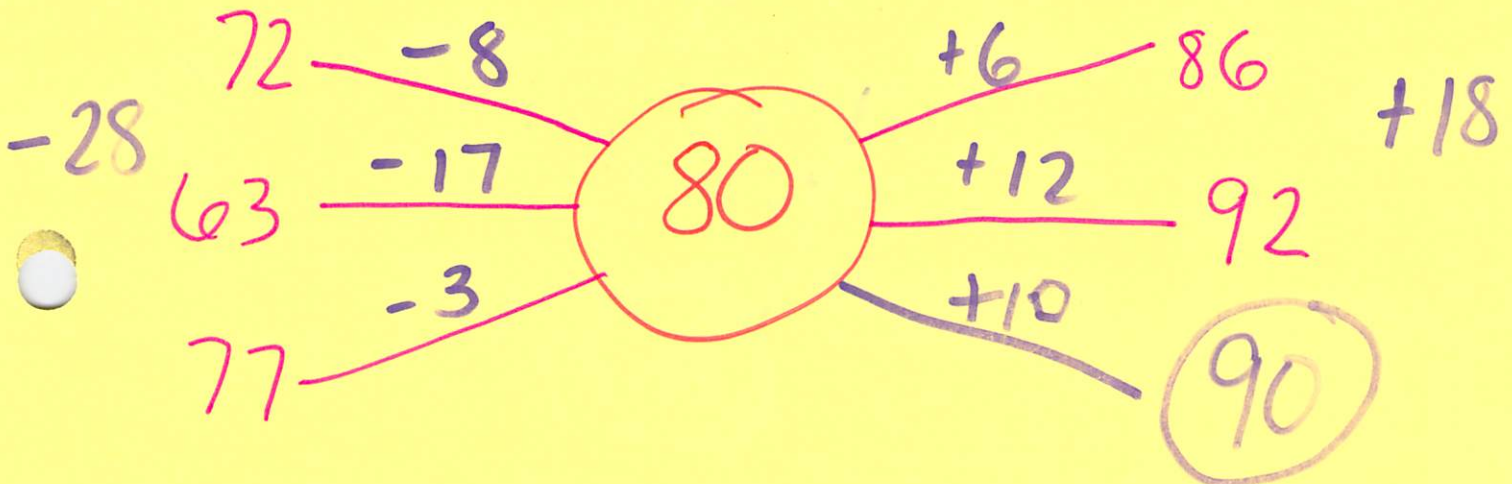
Find the Missing Value When Given the Mean

1. If you need a final average (mean) of 65, and your first 3 quarter grades are 74, 52, and 64, what does your final quarter grade have to be to pass?

70

−13

−1 65   +5   +9

52 54 56 58 60 62 64 66 68 70 72 74 76 78 80
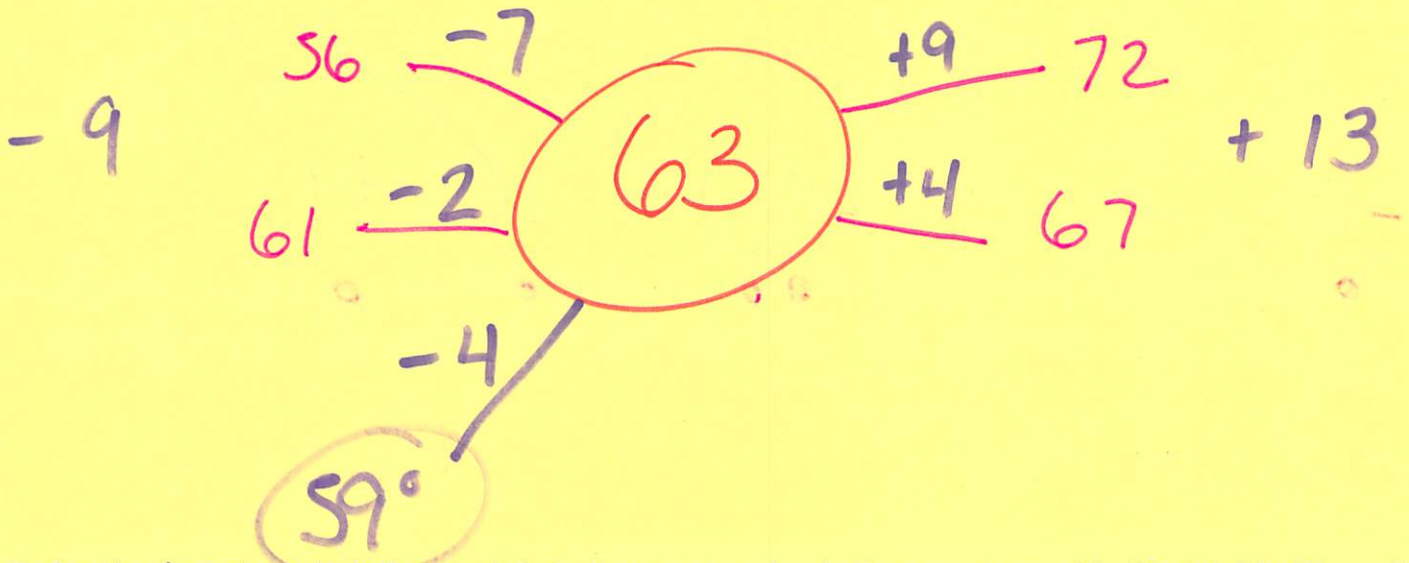
− 14   +9

2. The mean weight of 6 neighborhood dogs is 38 pounds. If five of the dogs weigh 30 lbs, 45 lbs, 39 lbs, 28 lbs, and 40 lbs each, what is the weight of the sixth dog?

46 lbs

− 18   +10

−10 −8   +1 +2   +7 +8

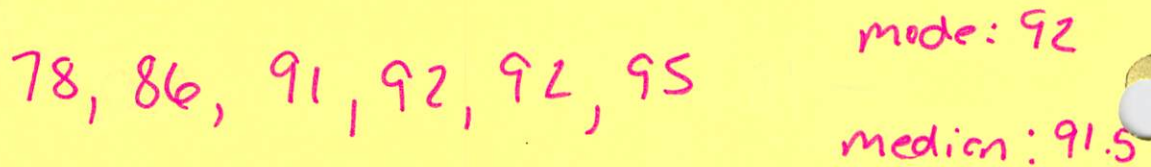24 26 28 30 32 34 36 38 40 42 44 46 48 50 52

3. On his first 5 biology tests, Bob received the following scores: **72, 86, 92, 63,** and **77**. What test score must Bob earn on his sixth test so that his mean score for all six tests will be 80?

72 ― −8   +6 ― 86

−28   +18

63 ― −17   80   + 12 ― 92

77 ― −3   +10 ― 90

4. The students in Woodland High School's meteorology class measured the noon temperature every school day for a week. Their readings for the first 4 days were Monday, 56°; Tuesday, 72°; Wednesday, 67°; and Thursday, 61°. If the mean temperature for the 5 days was exactly 63°, what was the temperature on Friday?

$$56 \xrightarrow{-7} \boxed{63} \xrightarrow{+9} 72$$

-9

$$61 \xrightarrow{-2}$$

$$\xrightarrow{+4} 67 \qquad +13$$

$$-4$$

$$\boxed{59°}$$

5. On the first six tests in her social studies course, Jerelyn's scores were 92, 78, 86, 92, 95, and 91. Determine the median and the mode of her scores.

$$78, 86, 91, 92, 92, 95$$

mode: 92

median: 91.5

If Jerelyn took a seventh test and raised the mean of her scores *exactly* 1 point, what was her score on the seventh test?

mean: 89

$$78 \xrightarrow{-12}$$

$$+1 \quad 91$$

-16

$$86 \xrightarrow{-4} \boxed{90} \xrightarrow{+2} 92 \quad +10 \qquad + \quad 1$$

$$\xrightarrow{+2} 92$$

$$90$$

$$\xrightarrow{+5} 95$$

$$+6$$

$$\boxed{96}$$