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MathxL Question and Answers

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1. **The principal represents an amount of money deposited in a savings bank account subject to compound interest at the given rate.**

Principal	Rate	Compounded	Time
$8500	3%	Daily	3 years

(i) Find how much money there will be in the account after the given number of years (Assume 360 days in a year.)

(ii) Find the interest earned.

Solution:

(i) After 3 years Amount (A) = $P\left(1+\frac{r}{n}\right)^{nt} = 8500\left(1+\frac{0.03}{360}\right)^{360\times 3}$

$= 8500(1+0.000083)^{1080} = \$9300.45$

(ii) Interest earned = A – P = $(9300.45 -8500) = $800.45

2. **Use the spinner shown to answer the question. Assume that it is equally probable that the pointer will land on any one of the colored regions. If the pointer lands on a borderline, spin again. If the spinner is spun once, find the probability that the pointer lands in a region that is red or brown.**

Solution: Here the number of red colored region = 3, number of brown colored region = 3 and the total number of regions = 10

So, the probability that the pointer lands in a region that is red or brown

$$= \frac{number\ of\ red + number\ of\ brown\ region}{total\ number\ of\ region}$$

Here is a list of shareable MathXL Answers that we have prepared for you.

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$= \frac{3+3}{10}$

$= \frac{6}{10} = \frac{3}{5}$

3. **Find the midrange for the following group of data items.**

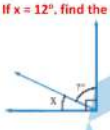
15, 12, 11, 10, 16, 13, 9, 11

Solution: Here the maximum data value is 16 and the minimum data value is 9.

Hence, midrange = $\frac{max\ data\ value + min\ data\ value}{2}$

$= \frac{16+9}{2} = \frac{25}{2} = 12.5$

4. **If x = 12°, find the measure of angle in which ?° appears.**



Solution: From the given figure,

?° + x = 180°

$\Rightarrow$?° + 12° = 180°

$\Rightarrow$?° = 180° – 12° = 168°

5. **How much money should be deposited today in an account that earns 3% compounded semiannually so that it will accumulate to $10000 in three years?**

Solution: To find the amount of deposited today, we need to use the formula,

$A = P\left(1+\frac{r}{n}\right)^{nt}$

Where, Amount (A) = $10000, r = 0.03, n = 2, t = 3 years

$\therefore P = A\left(1+\frac{r}{n}\right)^{-nt} = 10000\left(1+\frac{0.03}{2}\right)^{-2\times 3}$

$= 10000(1+0.015)^{-6} = 10000(1.015)^{-6} = 9145.42$

Hence, he should deposit $9145.42 today.

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